Introspection as Practice

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Pierre Vermersch trained as psychologist at the University of Aix en Provence before joining as researcher the Centre National de la Recherche Scientifique (CNRS) in Paris in 1970. His doctoral dissertation in cognitive psychology dealt with the implications of operative intelligence theory by J.Piaget for understanding adult intelligence in problem solving. Since 1988 he has developed an original interviewing technique, non inductive and yet precise, aimed to produce an a posteriori, detailed introspective verbalization of a specific livedexperience. This method caled in french 'l'entretien d'explicitation' is best rendered into English as 'explicitation interview' or 'explicitation session'. With the aim of laying foundations of first and second person methodology he is currently engaged in a reexamination of the origins of modern psychology (1870-1930). He is also involved in a research program of psycho-phenomenology in close association with philosophical

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How can one gain access to subjective experience and regulate this mode of access? How can one develop the competence needed to know that access of this kind has been obtained and to establish a genuine methodology which can be transmitted and in the light of it which it might be possible to form researchers in precise and deliberate fashion? Phenomenology, as a global idea, gives us a clue and indicates the requisite epistemology but does not seem to provide the know-how, nor does it specify the practise, since the philosophers who established and developed it (Husserl, Fink, Patocka, Merleau-Ponty . . .) did not succeed in specifying this practise while many of those who are indebted to the method today seem to be more concerned with the study of historical texts than with anything like a phenomenological practise. Psychology has a long and established tradition of suspicion, and even of dismissal, of anything which stems from the first person point of view. A tradition of attentive presence offers us numerous hints as to the conditions under which attention can be stabilised in such a way as to make possible an apprehension of subjective experience (cf. Varela et al. 1991, Wallace in this issue) but the employment of such a method requires a long apprenticeship and runs the risk of limiting the selection to a few well trained subjects. In such a context, one may well ask whether it even makes sense to take up again the question of introspection. Unless we look at this from the opposite angle: psychology having begun with introspection, a first reversal was accomplished by leaving introspection behind and adopting that third person approach which was badly needed at the time but which in turn gave way to a second reversal

which consisted in once again according a place to the first person point of view. Only, on account of the prohibition to which it has been subjected, first person methodology has not been able to develop and so to progress in a normal way.

In this article I am not going to try and define introspection. I am going to try to state as precisely as possible how the practise of introspection can be improved, starting from the principle that there exists a disjunction between the logic of action and of conceptualization and the practise of introspection does not require that one should already be in possession of an exhaustive scientific knowledge bearing upon it. (Just suppose that before studying cognition, you were required to define it or that you were required to have a complete knowledge of perception before being permitted to read a set of instructions). To make matters worse, innumerable commentators upon what passes for introspection do not seem to have practised it and have certainly never contributed anything to its development. My aim is therefore to bring to light a procedure of progressive improvement in the practise of introspection when it is employed in a program of research.

I would like to have been able to proceed directly to the clarification of the practise of introspection. But before getting there it will be necessary to first go back over the history of the development of introspection from the beginning of this century and to cut a way through the undergrowth represented by all the criticisms that have been directed at its very possibility. As a result of my many years of exposure to the literature on introspection I sometimes get the impression of being overwhelmed by the negative implications of all the critical objections, to the point of almost forgetting the practical efficacy of introspection.

Do we have to take the time to criticize the critics of introspection?

In the course of the two centuries over which the list of these critics never ceases to get longer, have there ever been any which have been conclusive? By trying too hard to denigrate introspection the critics themselves become suspect! After all, if any one of these criticisms were conclusive, the rest would become unnecessary! By forcing matters a little one might conclude that any such discussion would be a waste of time. Why bother to justify the method, to demonstrate the irrelevance of these criticisms because none of them is in principle capable of being conclusive, and on this point I am in agreement with Howe 1991: "Thus it has been suggested that if there is an argument against the use of introspection, it has yet to be found." p. 25 Why? Essentially, because these criticisms, which have hardly changed in two centuries, all adopt the same purely negative approach: impossibility, uselessness, impractical, an approach intended to cast doubt either upon the act or the object. Trying to prove the absence or the impossibility of something is not a very well founded epistemological enterprise, to say the least. If a claim can be rejected by simply furnishing a counter example, it becomes very difficult to rule out the possibility of finding counter examples in any field of empirical enquiry.

Only the ability to master the totality of the available possibilities (now and for ever, or else it would only by a provisional sentence) would give one the right to deny the possibility of a certain type of result or of a particular event. The research strategy which consists in trying to prove the impossibility of something is a waste of time. In general, it seems much more profitable to investigate "under what conditions . . . ?" "within what limits . . .?" Unless of course the arguments which inspire the attempt to demonstrate the impossibility of something are based on lines of reasoning quite different from the scientific,

which does indeed seem to recur frequently with the "opponents" of the examination of subjective experience and the use of introspection.

Let us take account of two of the oldest and most tenacious of these criticisms, since they both stem from Comte.

The first denies the very possibility of introspection on the grounds that it calls for a duplication of the subject, who can not at one and the same time be both on the balcony and in the street. "the thinking individual can not split himself in two, one part of which would think while the other would watch the former thinking. The organ observed and the organ observing being, in this case, identical, how could any such act of observation take place? This supposedly psychological method is therefore radically faulty in principle" (lesson 1, p. 34).In the first place this criticism, based as it is upon a material representation of cognitive activities stemming from Gall's phrenology could be discarded as having simply failed to take account of the evidence. However, at another level, this question of a self-duplication can be taken up again not as being impossible but as posing certain difficulties with regard to characterizing and modeling reflective activity which, as its very appellation reminds us, tends to trap us conceptually in the metaphor of reflection, in the representation of consciousness as self-duplicating.

The second criticism claims that introspection is unusable in research because it modifies the object which it is directed toward. Both Janet and Binet sought to get past this difficulty by invoking retrospection. To be sure, the solution creates a new problem of its own, that of the reliability of memory and the necessity of establishing the nature of the link between what is described a posterior and what is lived at the very moment the former is being described. But this solution only succeeds in dodging the difficulty by recurring to a methodology where observation in the present is replaced by observation bearing upon the presentification of past lived experience. But over and beyond this response, the most remarkable fact is that one would have to be informed about such an eventual change in posture even to be in a position to develop this criticism; and how would one be in a position to do so if not by making use of introspection? It alone is able to determine that there has been a modification, what kind of modification there has been, and how great the modification has been. For knowing about my internal state of mind, as also attesting to any transformation in it, presupposes in every instance the bringing into play of a first person point of view! So either the criticism of the results of introspection remains radical but also valueless since it disqualifies itself, or else it points in the direction of a good question (and not as devastating a question as might have been hoped for) and then it simply underlines the need for introspection as the condition of any assessment of its effects. The influence of observation on what is observed is a major epistemological problem, but it is a problem which extends throughout the sciences. For it is obvious that the idea of an observer who would somehow have succeeded in situating himself outside the system he is engaged in studying is an epistemological fiction.

From an empirical standpoint, there is certainly a methodological advantage to be gained by moving from a first person point of view where researcher and observer are confused to a second person point of view where the basic data is drawn from persons other than the researcher and can be multiplied in the context either of experience or of observation. Henceforward, the criticisms can be reversed, the impact of internal observation, if it is correctly set up, being eventually supplemented by information on the degree of stability of states, of acts, as well as of the contents aimed at in introspection (Piaget 1968 p. 186).

These two last critical examples have been introduced to show that, in principle, there is no real obstacle to using introspection. It only remains to consider the use that is actually made of it in programs of research.

1 - The Evidence from the Early Years of Psychology

It is impossible to do justice to the emergence of psychology at the beginning of the 19th century without first considering that the use made of "introspection" of "internal sense", of "apperception" sought to study what did not fall under the aegis of common sense but already demanded a much more erudite attitude. The life of consciousness, of thought, of imagination, affective life was no longer to be studied in a purely speculative way, in the manner of philosophy, but on the basis of observation in the perspective of the natural sciences.

This point of view was upheld from the very beginnings of psychology, for example by Maine de Biran (1807, 1932), generally recognized to have been the first author who could be identified as a psychologist (Voutsinas 1964, Moore 1970) and who not merely drew attention to interior events but also made use of internal sense. The point of view adopted was that of the first person a point of view from which not merely what is to be taken into account is what appears to the consciousness of the one who lives it; in addition, the research is restricted to the only person capable of observing it.

For all that, the strategy should not be regarded as naive, even if it can not be controlled intersubjectively. For example, Maine de Biran is well aware of the facilitating role that effort can play in the observation of intellectual activities. He studied the experience of reading and showed how, at the very moment in which we are aware that we have failed to understand a passage and in which consequently we reread it (Montebello 1994), we can observe our awareness of our own acts of thought on the occasion of our attempt to correct them. This initial insistence upon introspection is to be found again, considerably modified , with several founding figures of the psychology of the 19th century, such as Brentano in 1874, or Wundt in 1874, or again in the celebrated declaration of James in 1890 who described psychology as follows: "introspective observation is what we have to rely on first and foremost and always". An echo of this sentiment can be found in a statement by Binet in 1894: introspection is "the act by means of which we perceive directly what takes place in us, our thoughts, our memories, our emotions." And in 1903: "The new movement which has been launched for some years now and to which I, along with several of my students, have contributed as much as I can . . . consists in according a larger place to introspection." From this time on it is in order to make fun of the "old introspective psychology which asks us (its representatives) if by chance and by a barely concealed regression, we are not going to take over from the old school philosophers like Cousin (therefore harking back to the 1830s) , those methods of auto-contemplation which have been the subject of so much ribaldry.' ibid p. 2 and to show in what respects "the experimental study of the higher forms of mentality can be carried out with sufficient precision and control to have scientific value" ibid p. 2

The primacy accorded initially to introspective methodology may appear very naive today. But what is truly naive is to think it so. One has to realize that this introspection was already the result of a difficult initiative, demanding a reflexive conversion, a first epoche, in other words, the utilization of a phenomenological reduction. This first step was anything but simple. There is nothing naive about the suspension of the natural attitude which gets us involved in the perceptual spectacle, with a view, for example, to grasping its actual unfolding. Acquiring a practical mastery of the reduction presents real problems at this very time for researchers and students.

Moreover, these authors did not allow themselves to be limited by one single method. All those whom I have cited, even the oldest of them, were very knowledgeable about the physiology of their time and about its connection with the psychic. They were also well informed about the need for indirect methods to study children, the sick, animals, in short, those who did not dispose of speech.

2 - Methodological Improvements: The beginning of the 20th Century

The beginning of the 20th century is the great period for the mobilization of the methodology of introspection, which will now be presented as scientific and entitled "systematic introspection", "experimental introspection". It is employed with great intellectual enthusiasm in the context of a rigorously scientific experimental psychology of complex intellectual activities.

Three centers dominate the field: in Paris, Binet and his students; in the United States, at the university of Cornell, we find Titchener who was trained by Wundt (whose work he translated into English) and then there is the group of German researchers who go by the name of the Wurtzburg school and who, under the direction of Külpe (former student of Wundt who broke with his teacher) published intensively in the decade starting 1901.

The determination to establish a rigorous methodological framework capable of upholding the scientific character of the research is evident in the manner in which this research is presented. In effect, the transformation since the start of the 19th century is best described in terms of the passage from an exclusively first person point of view, where researcher and subject were not clearly distinguished, to a "second person" point of view where descriptions of subjective experience are gathered from a selection drawn from several persons.

This is the start of a process by which the gathering of data has become independent of the person of the researcher. When the researcher makes reference to his own experience (which happens frequently in the Titchener school), his experience (specifically labeled as being his own) remains just one among other inputs.

The subjective experience in question is now much better defined. Contrary to the initial research bearing on the experience of effort (but not on any specific occurrence of this experience) or the investigation of the flow of consciousness in general, specific tasks are now proposed, tasks which circumscribe, both with regard to time and the object, the experience

under examination. This orientation towards the realization of definite tasks represents a real revolution, a revolution which enables this research to be supported by what is now known as the experimental set-up and control techniques. The tasks are the same for everyone and they take place under identical conditions (we still don't have all the systematic refinements which will be strictly enforced thirty years later) and in accordance with precise instructions. In addition, the definition of these tasks will lead researchers to introduce independent variables by taking account of the reaction between one task and another, a relation which, with regard to the analysis of the results, will make it possible to draw inferences concerning the disparity of the success rate as between tasks and as between subjects. The researchers pay close attention to the methodological problems bearing upon the description itself (Titchener in particular had a lot to say about this, cf. the synthesis produced by English 1921, but Mandler and Mandler 1964 are also highly critical of abuses), the need to be as impersonal as possible in the use of descriptive terms, the need to distinguish between the description of the subjective experience itself as opposed to the reality evoked or any second order commentary (Titchener 1912a). The need to break the description down into smaller units to facilitate formulation is already beginning to be felt (Watt 1905). But one is still very far from an exact awareness of what is required by a description and by the non inductive guidance made possible by a proper interviewing technique. A part of the difficulty raised by description and by the problems associated with attention to subjective experience is surmounted by working with subjects who are trained in this kind of experience; which however raises its own potential objections, since this very training may render them less suitable as subjects, since they may already be sympathetic to the hypothesis of their observer.

This latter question is one which keeps turning up: is expertise even desirable? If yes, then who is supposed to have developed it? The subject itself, making possible better access to and description of subjective experience and/or the researcher, thereby improving his (the researchers) ability to guide and to follow the subject (in a non inductive manner) in the latter's attempt to accede to and to describe his or her experience?

Let us take one piece of research in particular in order to understand how these different improvements are put into place: for example Watt's research of 1905. He decided to study directed recollection for which he created a set of six tasks. I do not intend to go into the formulation of his hypotheses or the internal coherence of the theoretical frameworks of his time but simply to examine the form of the experiment.

> On the one hand we have a list of key words, on the other hand, six instructions: find a concept which stands in a relation of super or sub-ordination, in a relation of whole to part or of part to whole, in a relation of coordination of part to part. One is therefore faced with a variety of task which make comparisons possible. What has been developed since is the possibility of establishing a list of words with imagist etc connotations which, with regard to a particular verbal material, make it possible to know in advance, and with reference to a given population, how to master their inductive value from the standpoint of familiarity etc.

The key words are for the most nouns never exceeding three syllables. I was not able to locate the description of the instructions in the strict sense nor the device by means of which the key word was presented but from the instructions it is clear that the word was presented in writing.

The sample is homogeneous, composed entirely of professors and doctors of philosophy. The group is six in number, but for each subject there are fifteen series of tests, undertaken on average at a rate of two per day, each of which is devoted to one of the tasks in question (it might have been possible to adopt a procedure which would have controlled the ordering of the experiment more satisfactorily) with the result that, in all, several thousand items of elementary information are made available.

For each item (induced) the researcher is in possession both of the actual performance (the induced response) and of the possibility of classifying it with regard to its respect for, and its success in, following the instructions, as well as in regard to the way in which it establishes the relation between the key word and the induced response. On the other hand, the time taken to record a response, that is, the time between the presentation of the key word and the reply, is registered. Finally, the researcher also makes a transcript of the verbal description of the experience as lived out by the subject in the course of accomplishing his task. This description is split up into four moments which the subject was invited to describe separately: 1) the preparation, 2) the period prior to the presentation of the key word, 3) the appearance of the key word, 4) the search for the word induced by the key word and the reply itself. Three series of independent data are thereby obtained for each item of the test (the response to the instructions, the period required for working out the response, and the description of the process of working out a response offered after the event) and data as rich as this also allows for further possibilities of analysis and inference. It seems to me that we have here all the ingredients needed for a scientific research which respects the rules of experimental method.

This data was gathered in 1902 and published in 1905. We find here an experimental plan, a control of the experimental set-up, a collection of independent though complementary data. It would therefore not be on the score of its methodology that this procedure could be criticised ! In fact, very often discussion bearing upon the interpretation of the data has been amalgamated with criticism regarding the way in which it was gathered by reducing both to introspective data alone.

What I have sought to underline in spelling out this example in some detail is the fact that, from the beginning of this century the methodological criteria for research based on introspection had become "standardised" with regard to the requirements of experimental method. We could take other examples from the research done by the Wurzburg school (Meyer and Orth 1901, Marbe 1901, Ach 1905, Messer 1906, Watt 1906, Bühler 1907) or in other words like that done by Binet (1903) or again, by such students of Titchener as Hayes

(1906), Nakashima (1909), Greissler (1909), Pyle (1909), Okabe (1910), Clarke (1911) or Jacobson (1911), who took over from him in a big way.

If one wants to criticise this research it will not be in the name of some confused assortment of complaints leading one to believe that they were not very rigourous, that a century ago researchers only worked in a very approximative way and that this explains why the results have always been "judged" unreliable (but who has bothered to read carefully the research protocols of this period?). Of course, there remains the temptation to admit that they did indeed have a rigorous experimental method (in spite of the fact that they relied on introspective data!) On the contrary, what remained problematic for the Wurzburg school was that the data did not agree with the hypotheses formulated at the outset, leaving the researchers confronting an interpretive problem of major proportions which led them in a direction which varied radically from their expectations. This aroused an enormous scientific debate, Wundt (1907) severely criticising the experiments conducted at Wurzburg in the name of an exaggeratedly purist methodology, Titchener (1909, 1913) criticising the interpretation of the results by the Wurzburg school, Kofka (1912) criticising Titchener's results. I simply want to emphasize that the debate was directed toward the problem of contradictory interpretations: can there be anything like thinking without an evocative content (that is, without accompanying images - provided one does not assimilate the term "image" to a purely visual representation - neglecting all the other sensorial modalities? The work of the Wurzburg school all pointed in the direction of of the possibility of a non-evocative form of thinking (without denying, moreover, the evocative associations of all kinds present in their results). Titchener's theory (1909), backed up by his own data and that of many of his students, claimed that all mental activity was accompanied by sensorial representations. But he distinguished between representations relating to the content of the thought and those accompanying the execution of a mental act. However, not only does this distinction seem to have been lost on the critics (at all times), the very notion of a representation accompanying the act and not the content has never been understood. What Boring (1953) emphasises (and we will get back to this later) is probably a clear indication of the lack of understanding of data proceeding from introspection. In fact, the general topic of the relation between figurative and operative activity (as Piaget was wont to say), between representation and cognitive activity, remains a problem to this day, a problem which has certainly been complicated by numerous new theories and new original data but which still has not been completely cleared up. If one had to reject any research which led to apparently contradictory results one would have to expel from the province of scientific research some of its most precious discoveries!

Our view runs counter to the general opinion regarding the feeble, inadequate and unreliable character of this research. But the problem was not the methodology but the fact that the data bore directly upon a major problem for which the emerging scientific psychology of the day was not yet prepared. The data was not too weak, methodologically speaking, but too "strong" for the theoretical and and epistemological framework at the disposal of the researchers. They were unable to do much more than take up a position for or against associationism. Their expectations were so strong and so evident that the apparently contradictory results which they obtained could not be integrated at that time.

This work coincides with the birth of a long tradition of research which continues to this day and which consists in studying cognitive functioning from a problem solving angle. The point of departure is the decision to study "the higher functions", in opposition to the partisans of a study of elementary acts (cf the opposition Wundt encounters from his former

student Külpe, who is with the Wurzburg school from the very start), and to seek to define tasks and problems, a wholly new approach for the day, with a view to studying intellectual functioning with reference to goal directed and productive (the subject has to get a result, propose a reply), activity all of which makes it possible to establish a relation between what the subject does, what he says he has done, and the properties of his final response or even of intermediary responses when observable traces of such responses are available.

3 - Across the Century: neutrality, rejection, incomprehension.

As a methodology, introspection is now going to be regularly justified and defended, for example by Burloud (1927a and b, 1937) and the manuals and tracts of the period generally take a very cautious view. They tolerate this procedure but only on condition that it is not used exclusively. In the conclusion of Dumas' famous treatise on psychology (1924) the editor expresses this point of view quite well:

> "We don't need to insist upon the importance and the need for introspective psychology. Even though reflex psychology claims to be able to dispense with introspection, no one is under any doubt that every other form of psychology would be impossible without introspection. One can criticise the significance of introspective method, point out its difficulties, express reservations about the type of certainty which is claimed for it, prove that it deforms the very mechanisms it seeks to determine, even when it does does not cook them up to simplify the explanations and to confirm preconceived ideas etc., but when all these criticisms have been assembled one is still obliged to recognise that none of them is decisive and that the difficulties to which our attention is drawn simply require that we take certain precautions."

Nevertheless, the role officially accorded to introspection is on the wane. One of the last but most remarkable of the attempts to employ introspection is that of a philosopher, Sartre (1940) who employs it precisely with a view to answering questions concerning the relation of thought and imagery in one of the earliest attempts on the part of the young philosopher to establish a phenomenological psychology. In so doing he succeeds in bringing out the delicacy and the significance of analyses in the first person with respect to his own cognitive activity but neither makes use of a second person point of view nor acknowledges the constraints of experimental method.

It is also worth our while to quote some remarks by Guillaume in his manual of psychology dating from 1932, to the extent that he is able to point out in a dispassionate way the complementarity of introspective methods and the collection of observable evidence with reference to a simple example:

p. 11-12 of a paragraph entitled "Introspection and Language" in the first chapter: "The Aim and Methods of Psychology".

Learn the table of numerals shown here in such a way as to know it by heart."

12	8	9
4	21	6
7	15	11

On careful observation, some will perhaps find that, in reciting this table, they in a certain manner, read it off an imaginary table and so make use of a visual representation. Others will let themselves be guided by an auditory recollection as if they were reproducing a melody that had just heard. The first have a simultaneous image of the whole in which each figure has its place; the second listen inwardly to a succession of syllables. What can we learn from these descriptions drawn from introspection? The results do not seem to be essentially different from those that an objective method can furnish. If we now require of those who have learnt the table of numbers not to observe and describe themselves but to reproduce the lines either vertically or horizontally, ... These variations are extremely difficult for those who learn by hearing who are really only able to to write the numbers down in the order in which they were learnt. Those who are capable of evoking a visual table have much less difficulty. . . . These examples show that the subjective method is not so very different from the objective, to the extent that the fruitlessness of the former is enhanced by being tied down to verbal expression and that it is really just a matter of alternative approaches to the same science. We shall see that both of these methods have contributed to the development of psychology. If the purely objective technique tends to prevail in animal, infant and pathological psychology, the two procedures are employed concurrently throughout the greater part of normal human psychology. One should never fail to make use of introspection in order to clarify an experience; for it has its part to play in making sense of the objective results and will often make it possible to dispense with laborious control techniques."

This example shows that there should not be any antagonism between different approaches; it shows the limits which the "objective" method confronts in discovering how the subject goes about things. In fact complementary requirements can bring to light the use of different modes of encoding information (simultaneous/successive), but it does not make it clear, for instance, whether the successive approach stems from a verbalisation of the reading of the numbers or whether it is a matter of placing each number in the line of a particular path; whether the verbalisation of the reading of the numbers makes use of a counting system, relies upon a rhyming scheme or not etc. A comparison between these two approaches also shows that an

interpretation of the objective data is impossible with reference to the content of subjective experience. Finally, this study seems to me to be exemplary, in the sense that neither of the two methods is capable of yielding the meaning of the data, that by themselves they are not capable of providing a theoretical framework for interpreting the data.

Introspection disappears behind verbalisation.

Studies of problem solving are now going to multiply rapidly and provide the paradigm for the study of cognition. At the same time, references to introspection are going to disappear. Discussions of method take priority over the accumulation of verbalisations, that is, over the results of introspection. Verbalisation takes the place of any taking account of the introspective act which might promote an awareness of the experience and, from 1934, with Claparède, we find a procedure destined to become well known, the procedure of "thinking aloud".

Introspection seems to have disappeared. Only the results of introspection, that is verbalisations, are brought to light. For the latter are public, objectifiable; they issue from a piece of behaviour so everything is O.K., is scientific even if one has lost an essential part of what takes place with the subject when one asks him to describe how he has proceeded. Along the same lines, innumerable questionaires are going to be developed, questionaires which ask intimate questions of the subject without being in the least concerned with the way in which the subject goes about answering them. Is there only one way to do this ? As Boring points out (1953), introspection is still there under another name: verbalisation. The most remarkable case, one which constitutes a point of reference for an entire generation of cognitive psychologists, is that of Ericsson and Simon (1984, 1993), whose book Protocol Analysis enjoyed a great success. Strategically, the authors have to defend themselves against the criticism of practising introspection. They have to show that it is possible to use verbalisations descriptive of the subject without, for all that, relapsing into a "non scientific" introspection. They will even go so far as to cite Watson, to establish that it is "scientifically correct" to collect data of this kind. On the basis of innumerable experimental results, they will argue that simultaneous verbalisation of the activity taking place does not modify the process under investigation and that the contemporaneous character of this putting into words eliminates most of the risks of deformation, of forgetting, of rationalisation, which an aposteriori verbalisation might bring with it. While talking of verbal encoding, of simultaneous verbalisations, they manage to forget that, in order to produce these verbalisations, the subject has to have access to something even to be in a position to describe his mental acts, the contents of his representations, and that, in consequence, he certainly does make use of a particular cognitive act.

This deliberate restriction of the methodology to concomitant verbalisations alone, without taking into account the subjective act which is responsible for producing them, for nourishing them, also makes it possible confine oneself to an extremely impoverished subjectivity. A simple opening instruction to "say aloud" is enough; no need for relational dimensions, for genuine maintenance techniques ensuring an element of mediation in the course of the introspective process, which is however certainly present. This way of concealing introspection under verbalisations alone is a way of tolerating the employment of

introspection without having to comprise oneself by taking account of it, and so constitutes an indirect testimony to the impossibility of dispensing with the point of view of the subject. But the most important consequence of this taboo placed upon introspection has been fifty years without any development or improvement in this methodology.

If it held any interest, we would know about it . . . this data is unusable .

Nothing illustrates more convincingly the calling in question of a methodology of the first person than the history of these programmes of research.

One gets the impression that they were brutally expelled from the university scene. One is entitled to think that however forceful the criticism of behaviourism or other modish approaches, if there had been something interesting in the world based on the methodology of introspection, it would have been pursued, even if only discretely, on account of its results if nothing else. To the extent that it seems to have produced no enduring results, perhaps one should simply continue to do without it! The argument appears convincing. It gives us reason to question the interest in pursuing the matter further at the risk of finding oneself in the uncomfortable situation of trying to be in the right where everyone else, and not just the negligible quantities, seem to have been in the wrong in the eyes of history.

To start off with, one might look for historical explanations for this lack of continuity. First of all, the three schools disappeared with their founders: Külpe takes off from Berlin in 1909 and dies in 1915 and no more work comes out of Wurzburg, Titchener dies in 1927 (Leahay 1987) without leaving a successor, Binet (1857-1911) famous for the diversity of his interests (Avanzini 1974), was already devoting himself to other work, in particular to his scale for the rating of intelligence. Still, this work was at least initially connected with the research of Burloud (1927 a, b, 1938), and then with that of de La Garanderie, a pupil of Burloud (1969, 1989), who produced a number of works destined for pedagogical use. To this it has to be added that the disappearance of introspection coincides with troubled times in European history, which caused numerous lines of research to be interrupted. Also, all work was stopped by the 1914-18 war, and it is not until 1921 that a link with the past is reestablished with further publications. And the same holds of the rise of fascism: the emigration of German psychology, silence on the part of Italian and Russian psychology, then the rupture caused by the second world war.

But this historical background still seems insufficient to account for the virtual disappearance of introspection. Why did it not make a come-back in the 50s? I believe that the real problem is the meaning accorded to the descriptive data accessible to introspection. The criticism no longer bears upon the method of collecting data but on the significance of the data collected, on their functionality.

Hence, introspection is supposed to be useless because the mechanisms and essential properties of cognitive functioning do not stem from subjective experience but are sub-personal. This offers a way of interpreting the results obtained by the Wurzburg school relative to the evidence for imageless thinking. What is essential to the functioning of thought is not accessible to consciousness, does not bring with it any describable phenomenal

evidence. In other words, don't ask the subject for something about which he can not know anything. As a matter of fact, the hypothesis is not unreasonable. Many of the facts studied by psychologists can only be brought to light by means of special equipment or by statistical inference. What is wrong about this line of reasoning is that it moves from the fact that there are facts which are inaccessible to consciousness to the conclusion that even what is accessible to consciousness is uninteresting or non scientific and this *apriori*. Which is not just absurd but wholly unjustified. However the question which now remains open is that of the meaning and function of those psychological elements which arise from a properly phenomenological consciousness, that is, those which the subject can experience.

This is one of the most crucial criticisms directed at the world of Titchener by Boring (op. cit. p. 174). The latter quotes in particular an anecdote in which Baird, a student of Titchener, attempted to demonstrate the process of introspective questioning at the 1913 APA Congress, and in which he describes the general reaction as a failure to appreciate the interest in descriptions which are perceived as ". . . a dull taxonomic account of sensory events which, since they suggest almost no functional value for the organism, are peculiarly uninteresting to the American scientific temper." In particular, during the undertaking reference was made to kinaesthetic sensations which no one knew what to do with. Whereas a visual image can support a piece of reasoning, can be described in terms of the properties of the task, the presence of kinaesthetic sensations does not seem to have any interest with regard to the functions of the mind. It is precisely this sensorial dimension which attracts the most complete incomprehension. The cognitive psychology of the beginning of this century hoped to come to terms with cognitive functioning as a prolongation of sensualism by means of conscious images which were supposed to accompany all thought and runs up against an imageless dimension of thinking, its operative dimension (in Piaget's sense), its finalised dimension. The study of problem solving seeks logical laws connecting phases of reasoning structured by the content of the reasoning process. In this framework, the sensorial dimension of thought, initially rejected as an outdated hypothesis is then later totally forgotten in the programmes of research.

In fact, it will be practitioners (teachers, re-educators, speech therapists, trainers etc) who are going to make sense of it, who are going to take account of the sensorial modality in which a content of thought, a mental act, is experienced as being used. These practises are numberless, the articles and works devoted to it not bearing any relation to what has been developed in the course of fifty years of apparent neglect of introspection. The implications of this development are so important that they ought to be developed in their own right. For the gathering of information stemming from subjective experience and making use of introspection (without the latter ever being the explicit theme) bring to light an entire set of cognitive properties, linked to the subject's own use of cognition (primarily in a pre-reflective way). How do I provide myself with an image, how do I organise information in my representation, what are my criteria for the recognition of an identification. Obviously, a great deal of third person research is to be found relating to all these points, but what these practises reveal is that there is a disjunction between what the subject knows how to do with his cognition in a practical way and the deeper laws which objectify the properties of the practise. That to which one can have access through the description of subjective experience appears secondary or less central, but one could also say that it is a question of the handle of cognition. To be sure, the blade is what is essential but it can not be used without the handle. Or rather, the way in which the handle is used describes the reality of the subjective practise of cognitive activity. This remarkable fact is consistent with the fact that the data which stems from

introspection proves to be more directly relevant to occupations which form, re-educate, look after, improve the activities in question.

What makes sense of the information stemming from introspection is to be found in practises, in as much as it is the latter which bring to light their functionality, their relevance. From the other side, the practises of psychotherapists, of re-educators, of trainers employ know-how which is built up in a pragmatic fashion on the basis of the professional practise itself and aside from the university programmes of research in cognitive science which seem to have been left behind.

In the first place, introspection seems, to the researchers of the beginning of the century, to be the only viable methodological approach; but then it was only retained at best as an auxiliary procedure or only employed on condition that no mention should be made of it and that reference should simply be made to its product in the form of verbalisation. It seems to me that subjective experience is now taken account of in such a way as to open up a new programme which is no longer to be thought of as simply complementary to research in the third person but also as establishing a level of analysis which could be supported by a phenomenological psychology.

4 - Improving introspection?

Have we improved the methodology of introspection since Maine de Biran? If none of the criticisms which have been formulated have proved decisive then how could the practise of introspection be improved?

We can try to reply to these questions by envisaging introspection successively:

- as the source of empirical data,

- as an epistemological, ethical and practical question,

- as an act.

Introspection as a source of empirical data

As a source of empirical data, introspection furnishes descriptive verbalisation in the second person of what can appear to the subject, within the limits of what has already been brought to conscious awareness or of what could be brought to conscious awareness. In this respect introspection presents no greater problem than any other source of data or, what comes down to the same thing, just as great a problem. No more than with any other source of data, no

claim is made on behalf of these verbalisations being true a priori. The fact that it is the subject who verbalises his own experience does not render it any more certain a priori. Just as much as any other source of data, introspective data has to be subject to critical evaluation and, more particularly, inserted into a framework of research which makes it possible for it to be correlated with other sets of data obtained independently (traces, observable data, time). The play of experimental variables as well as the sampling choice will play their usual role whether this be on the plane of experience or upon that of observation (Vermersch 1983). There is nothing new about this point of view. One finds it regularly expressed by authors who do not understand the relentless criticism to which introspection has been subject (Radford 1974, for example). Piaget, in his polemical work of 1968 which targets philosophical psychology, has this to say:

> "On the other hand the problem of introspection remains over and it is on this point that we touch upon the essential difference between scientific psychology and philosophy. . . . . p. 168
>
> Even if it uses introspection, scientific psychology looks for controls, which means that we are not talking about objectivism, since consciousness is involved, but of objectivity." p. 192

Besides, with scientifically minded psychologists, this point if view had already been adopted from the beginning of the 20th century, as I tried to show above with reference to the world of the Wurzburg school, of Binet, of Titchener and his students. Improvement has been confused with the general evolution of research methodology, even if we are still waiting for ways of dealing with the data of verbalisation which would facilitate its exploitation. (Ericsson and Simon 1984, 1993).

Introspection as an epistemological question.

If psychology certainly enjoys the dubious privilege of working with a double faced object , since it is one of those disciplines which has the subject as its object of study, the question of drawing the line between the first person point of view and a third person point of view which relies upon traces and upon observable evidence remains unresolved, even if, in the first place, it proved simpler to set it aside (what Piaget calls a type beta regulation which consists in trying to maintain an equilibrium by ignoring the source of perturbation). The effort to ignore first person data has meant that we are very far from having developed the competence and experimental experience needed to develop a rigourous methodology in the light of which researchers might have been formed. Now that psychology is certain of its status as a science

in its own right, perhaps it might be possible to stop being frightened of introspection and to start shoring up the phenomenological point of view with a view to bringing it into relation with other sources of evidence. It seems rather obvious that, for example, the ever more refined data which is proceeding from neuro-imagery calls for more precise coordination with the description of subjective experience which the tasks and instructions are supposed to induce. As long as the comparisons relate to highly contrasting situations (visual perception versus visual imaging for example) averaging out allows one to obtain results where the residual variation can be set aside. But the whole history of research shows that, sooner or later, one has to refine the qualitative typology of the data furnished by the subject, if only tentatively, in order to be in a better position to integrate the inter and intra individual sources of variation. (Marquer & Pereira 1995).

Over and above the epistemological aspect, several authors underline the ethical motive involved in taking account of subjective experience (Varela et al 1991, Howes 1991). How much longer can we afford to remain blind to this dimension? Are we not under some sort of obligation to add a truly scientific dimension to subjectivity ? For my part, I would want to add that what is also at stake is the need to coordinate the innumerable practises which make use of first person data (teaching, remedial action, re-education, training, coaching, therapy etc) with the present scientific vacuum which surrounds all those aspects of cognitive functioning which can only be apprehended at a phenomenological level.

Introspection as act.

But these two points of view have done nothing more than clear the ground. If I were to stop here, I would be stuck in the position - unchanged from the beginning of the century - of one who talks around the topic introspection without ever tackling it as concrete praxis, that is to say, as a psychological act effectively put into operation by an individual subject. Here too however, it is necessary to distinguish different aspects of the problem, the first concerning introspection as reflexive activity, the second touching upon the verbalisation which follows thereupon.

Introspection and reflecting activity.

What does it mean to treat introspection as an act? We first have to get past a piece of specious reasoning. As if the very use of the word "act" exhausted all that could be said about it, one first encounters an obstacle well known now in teaching and in psychology, the implicit character of the procedural dimension. Describing an act structure requires that one describes its temporal unfolding at differentscales: the linkage between subordinate goals, the succession of stages and at the heart of each stage, elementary actions seen both as acts to be accomplished and as information-gathering acts, then the micro operations etc (Vermersch 1994).

But in order to work with such a description it is not only necessary to practise introspection (it is certainly necessary to refer to lived experience) but, in addition, it is necessary to take account of the act itself as a subjective experience or, in other words, to proceed in the direction of an introspection of the act of introspection, which had never been done before by psychologists practising introspection. Titchener alone (1912 b) posed a question with regard to the description of the practise of introspection - without giving any very satisfactory response.

> "Experimental introspection, we have said, is a procedure that can be formulated; the introspecting psychologist can tell what he does and how he does it." p. 500.

For after having reviewed the publications put out by the Wurzburg school, then his own and those of his students, he admits that his conclusions are meagre:

> "it is evident that this account is meagre; it is evident too that it contains an unsifted mixture of fact and theory, of exposition and evaluation." p. 506 op. cit.

and a little further on:

> "one gets the impression, indeed, that the experimenters, or at least the earlier of them, took the introspective method for granted: they were setting a straightforward task, which the trained observer was competent to perform" op. cit. p. 507

In the final analysis the harvest proves disappointing, a fact whose significance he tries to reduce by pleading the novelty of this step and the need for improvement but which leaves entirely unanswered the question concerning the nature of introspective practise. In all the literature bearing on introspection I have not been able to find a position more clearly and lucidly expressed than that offered by Titchener. However, what he did not see in this article is that he was only exploiting second hand information. In all his citations the only thing that is taken account of is the third person discourse of experimenters. No reference is to be found to first person descriptions bearing on the practise of introspection. What is missing is a recognition of what has to be done to bring to fruition a first person study of the act of introspection, that is, to use as an instrument what one hoped to study by bringing into play a supplementary stage which philosophers call "meta-reflection" (Misrahi 1997).

Let us try to clarify the framework which might allow us to throw light upon the act of introspection.

Consider the diagram below: at time t1 the subject carries out a task. He lives through something and this lived experience constitutes an initial point of reference (L 1) with reference to what follows. In the context of his research work, the subject, alone or with a mediator, tries to describe his lived experience L 1. In the course of doing this he lives through another lived experience L 2, which enables him to gain access to L 1 and to describe what he thereby becomes conscious of.

(insert here diagram of lived experience)

Let us note in passing that this movement directed retrospectively at L 1 requires a first reduction in the phenomenological sense of that word, so a mode of givenness which transforms the act which I accomplish in a natural and transparent way (give me the image of a word for which I look for the spelling for instance) into an object for my attention. In order for there to be a givenness of the act by means of which I bring to mind the visual image of a word, there has first to be a break in the way things are given.

Now, in order to know in what the act of introspection consists, my attention has to be directed at L 2. and the focus of the problem has been shifted. For in order to know how I gain access to L 1 with a view to becoming conscious of it and describing it (which is the whole point of carrying through L 2), I have to bring about a new reduction/mode of givenness which, in a later time t3 is directed at the act of introspection carried out at L 2. The content of L 2 is the past lived experience L 1, while the content of L 3 is the past accomplishment of that I did in L 2. There has to be have been an act of the kind which has come about in L 2 in order for L 3 to be carried through. In other words, one must first have practised introspection (in time L 2) in order to make of it an object of study and so to practise an introspection of an introspection. This had quite simply never been done in the context of scientific research !

To get a better idea of the practise of introspection one certainly has to practise it (which seems to have escaped the attention of numerous commentators). Three elements have to be taken account of: the time of meta-reflection, the description of the act, the originality of the reflective activity.

Access to the time in which the introspection is practised (L 2) and its description are the essential condition for a comprehension of its realisation.

But just as essential is the use of the act category. For this is the condition without which it becomes impossible to dissociate, in the description, between the content of the activity (in other words the theme, for example, the word whose image I am looking for), and the act by means of which this image is given. The absence of this distinction between content and act seems to me to lie at the root of many of the difficulties experienced by psychologists at the start of this century, restricting them to descriptions in terms of the mental state or the

image and neglecting the temporal unfolding which guides the organisation of any precise description of an activity.

With the distinction between the different lived experiences L 1, L 2, L 3, and that distinguishing content and act, we have only succeeded in bringing to light the framework necessary for grasping introspection as the effectuation of an act; but the act itself still has to be described.

In trying to do this, the first result one obtains is a feeling of poverty, of indigence, of the platitudinous character of the description which comes at the very beginning. What is easy to describe (though still at a global and highly synthetic level) is the content of the act, what it relates to. On the other hand, apprehension of the temporal unfolding is gappy and highly limited. In retrospect, Titchener's complaints about the meagre harvest regarding the practise of introspection seem to be justified and Lyons seems to be right when, in attempting to reproduce the research of one of Titchener's students , Okabe (1910), he concludes that the experiment came to an end before it had even started since the students had nothing to describe. In truth, this initial poverty is only the typical symptom of reflecting activity, that is, of a cognitive activity undertaken with a view to developing conscious awareness, therefore, to relate to something which has not yet become the object of conscious awareness. In the second place, a more or less durable vacuum is experienced. By contrast to rapidly developed reflected activity (the content has already been brought to consciousness, at worst it is momentarily pre-conscious) reflecting activity is a constituting activity, it creates new data on the representational plane (if one follows here the principle underlying Piaget's model of becoming conscious (1974) which begins with a stage of reflectivity) and this creation takes time. The principal obstacle is that the subject who relies upon what he can have access to most easily and most rapidly, that is, reflected consciousness, is then convinced that he knows that he knows nothing or at best a few banal generalities. The practise of introspection, therefore of reflecting activity, shows that the filling in" takes place by stages and in accordance with a rhythm which is different from that of reflected activity and that certain conditions are necessary: suspension of the familiar activity making way for a momentary vacuum so that a new fulfilment can be effectuated, access to the lived experience which serves as a point of reference in line with a genuine presentification of the past situation (whose criterion is the presence of sensorial impressions resulting from the reliving of the experience). It lies outside the confines of this article to enter into a detailed description of this reflecting activity, but what seems to me both essential and novel is to have brought to light an initial difficulty surrounding any attempt to carry out an act of intentional introspection (aimed at producing a detailed description), a difficulty which has not been seen, still less studied, but which can now be surmounted.

In order to improve introspection we have to invent ways of getting past the difficulty connected with the means of access. Two ways forward are possible, both of which presuppose mediation as also an apprenticeship, followed by the period needed to develop practical expertise. But this expertise can be developed either by the subject himself in the course of his own self-observation or by the mediator responsible for conducting the interview.

1/   This expertise can be acquired by the one practising the introspection. This was the path adopted from the beginning of the century by Wundt or Titchener both of whom insisted (although in a very different way) on the need to form "observers", to subject them to a long

training until they had become reliable in regard to what they described. Hence, this expertise was not verified with reference to the practise of gaining access to subjective experience (the meta-reflective dimension) but with reference to the calibration of the results obtained by verbalisation. A completely different way of proceeding is operative in the formation of a meditator who learns to stabilize his attention and to distinguish objects of observation which did not stand out at first in and through an accompanied practise. The main difference with psychologists was the latter were not themselves very competent and were quite incapable of giving advice on the development of the practise itself, while contemplative practises have enjoyed centuries of training and have developed sophisticated teaching skills. Unfortunately, this solution requires a lot of training time and so only a limited number of students can be prepared for research in this way. It also brings with it the disadvantage of limiting the sample still further in the case of specialised activities (for instance, if I have to combine this sampling criterion with the learning of scores by pianists). By contrast, for certain research themes it might be necessary to count on the expertise of such subjects to the extent that they would be the only ones capable of gaining access to certain objects of research, for example, those of short duration or which require high levels of discrimination.

2/   It is also worth thinking about second person methodology based upon a mediator whose aim is to help in the unfolding of the internal act making possible access to the lived experience which features as the point of reference and then to guide the process of verbalisation. In this case, the expertise relative to the act of introspection is borne primarily by the one who accompanies the process and indeed makes up one of the dimensions of of an interviewing technique. This is what I have chosen to develop by clarifying interview techniques (Vermersch 1994). My source of inspiration has been contemporary psychotherapeutic practises which regularly make use of introspection to gain access to traumatic events by reliving them. But the past does not have to have been traumatic in order to be presentified. Nor does one have to be a therapist, or even to be in a psychotherapeutic situation, to guide someone towards the reliving of a past moment ! The advantage of this solution is that it is not necessary to require in advance that the subject possesses any personal expertise with regard to introspection and so one can easily gather second person data with a view to extending the sample or as we are wont to do in our present research, with a view to taking account of all the subjects belong to the population in question. However, not every observable object can be rendered accessible in this way. To gain access to objects of very short duration or whose observation requires a high level of discrimination an interview may not offer the requisite mediation.

It seems to me that both these two paths, that of mediation and that of expertise relative to gaining access to subjective experience have to be retained and employed in a complementary manner, depending of course upon the particular programme of research.

The work of meta-reflection shows that the development of introspection presupposes the controlled employment of reflecting activity as the condition of conscious apprehension of lived experience which otherwise remains largely pre-reflective. In other words there is a field of potential information which does no simply bear upon first person facts relating to subjective experience but, in addition, the greater part of this data is only accessible in the context of a consciousness which is retrospectively directed. Indeed, this is the real meaning of reflecting activity. Most of the research has been guideed by the idea that it was enough to ask the subject for a description in order to obtain one or at least to put certain questions to

him in order to have his answers. Simply adopting this approach is enough to see that things don't work like this. If the subject wants to be able to produce a description he first has to presentify the lived experience which serves as the point of reference and to suspend his usual way of doing things in order that what previously only existed "in act" (therefore in a pre-reflective way) now appears as object. This is the difficulty, or even the condition, which makes mediation or an apprenticeship necessary.

Introspection and Verbalisation.

But the reflecting activity which characterises introspection in its way of relation to pre-reflective lived experience is of interest for our research only to the extent that it creates data, only that is, to the extent that the subject verbalises which appears to him. Since verbalisation is not the whole of introspection but only one facet of it the quality of this verbalisation is what matters, that is, is precision (the density of the description), its completeness relation to a particular object of research, its character as a description - which should minimise the element of interpretation.

To set out deliberately to obtain verbalisations meeting these qualities only seems to me to be possible on condition that mediation is employed, that is, an interview technique. This decision is not at all obvious. With regard to the collection of verbalisation data relative to the study of problem solving, for example, the use of an expert interviewing technique has hardly ever been envisaged. The intersubjective exchange can be summed up as a matter of finishing verbalisation instructions and of offering encouragement (Ericsson and Simon 1983). This choice had already been discussed at the beginning of the century but since the very concept of an interview technique did not exist then it finished up as a debate about the interest of posing questions of formulating follow-up strategies. Titchener (1912 p. 506) came down strongly against such procedures, so the Wurzburg school researchers were divided on this issue. The great fear, and perfectly relevant one, was and still is that of inducing the content of the replies by the formulation of question and so to run the risk eliminating spontaneous expression or prompting the replies. However, some progress has been made in interviewing techniques since the 1900s. Innumerable therapeutic techniques have devoted to promoting careful attention of what is said, to improving he prompts, a technical progress which seems to have entirely ignored by cognitive research. Not only is it possible to not to pose closed questions or to pose questions in the form of alternatives which bring, by their very formulation, more information than they are supposed to be gathering. Much is gained by replacing the questions: "Did you begin by looking at the drawing?" or "Did you look at the drawing or did you read the instructions?" with the question : "What did you begin with?" not only because the latter formulation is open ended but because it is at one and the same time both open (it makes no suggestion as to what has taken place) and structurally focused since this formulation directs attention to an relatively well defined and identifiable moment (the beginning) unlike a question such as: "what do you think of what you have done" which is also open but oriented more towards the production of a judgment or a commentary than towards a descriptive verbalisation of the lived experience. This is not the place to enter into the detail of all the techniques allowing one to produce questions which are both precise and which do no induce specific responses, nor to review all the theoretical grids allowing one to recuperate what is implicit in what is said with a view to pressing for information which one

sees has not yet been formulated. But a more adequate exploitation of introspection depends on techniques such as these, techniques which I have presented elsewhere.

I am very much in favour of apprenticeship and the use of interviewing techniques. What are my arguments?

- the subject expresses more than his project requires him to communicate.

This claim already seems to me to require a witness who collects and notes indications which are non verbal, para-verbal and epi-verbal. A video recorder could provide all this information. But it is not the camera which, having recorded some gesture accompanying the verbal expression, is going to draw the attention of the subject to this gesture which expresses more or something other than, the words used and so prompts further clarification. The subject itself is not capable of exploiting these signals since he is no conscious of them. To be sure we must not fantasize the existence of an observer capable of knowing everything the other is trying to say, but simply that of a companion attentive to what is being expressed across what is said and who utilises these signals to redirect the subject with a view to getting him to explain what he expresses but does not formulate.

- The subject verbalises less by himself that he would have done with a mediator.

This second claim might appear to be in contradiction with the first. But this is not the case inasmuch as it does not bear on the same issue. In the first case, the subject provides - in non conscious fashion - more information than what he thinks he has given and the presence of an interviewer makes it possible to prompt him with regard to what has been shown but not named, in the second case sand with reference to what the subject intends to formulate, it is possible to carry him along further than he is capable of going by himself. And this for several reasons:

* As soon as there is a need for delay, for an inhibition of the most immediate modes of response, the presence of a mediator facilitates the necessary suspension. In fact, putting something into words is done in accordance with the rhythm of what us disclosed, so preferable slowly, and external guidance can help the subject to take the time to become open to the appropriate form of expression. Gaining access to subjective events of short duration or the descriptive dismantling of intermediary stages requires a slowing down, a temporal dilation of the moment which has just been lived, which can be facilitated by a guidance which transfers the attentions of the observer to the specifics of what he has just lived through rather than to the regulation of his mode of access. The interviewer can help to regulate the moments when he reflected knowledge takes over from the reflecting process (a little like in drawing when I draw a retangular table because I know it is rectangular even when what I see is trapezoid). Staying with the articulation in words of what appears is a delicate matter sand demands that one maintain a meta position with respect to what one verbalises. It can be done by oneself but not without a long apprenticeship and training.

* The search for a precise description, its scheduling, are activities which are superimposed upon the simple fact of saying. This multiplies the risks that certain aspects remain implicit.

The presence of someone capable of detecting the implications helps in the production of a more precise and complete description. Paying attention to the fragmentation of the description (Vermersch 1994) immediately alerts one to the global character of what is named and so makes it possible to follow the matter up by asking for a break-down of what is described.

* The subject can also be induced to say more than he know if left to himself if he is prompted by questions which lead him to turn his attention to aspects of his lived experience for which he lacks the categories needed to make it possible for him to be aware of them. But again this guidance requires structuring.

It is not difficult to find arguments in favour of utilising the mediation of an interviewer but the limitations of the mediator himself may well present a problem. On the one hand, becoming an expert interviewer takes a long time and a lot of training is needed to master the techniques and to deploy them in the course of the exchange. On the other hand, whatever the level of his detachment he mediator is still bound by the limits of his culture, his pre-conceptions, his implicit blinkers, his unconscious projections. And it would be vain to suppose that it is even possible to throw off all these limitations. This affirmation can only bring us back to the double necessity of intersubjective regulation and of cross-referencing verbalisation data against alternative sets of data such as traces or observable evidence.

Introspection and Description.

Let us suppose that we have succeeded in perfecting this reflecting activity, let us suppose that the process of verbalisation goes off well thanks to an effective, precise and reliable interview technique, a fresh stratum of problems still awaits us, linked to the fact that verbalisation produces descriptive data.

On the one hand, this implies that first person descriptive data are insufficient in themselves to generate a complete research, they are not sufficient in themselves to deliver causal explanations and must necessarily be integrated into a larger programme which takes in other data. Titchener certainly saw this difficulty (1912) even if his own work did not go very far towards solving it.

But on the other hand, this only serves to emphasize the fact that we can not restrict introspection to descriptions and that therefore to ask the subject for something other than descriptions is to leave the field of introspection and to move in the direction of representations, towards naive theories of the subject. The goal of introspection is to gather factual descriptions not to expect the subject to become knowledge about his own subjective experience. In consequence, it seems completely out of order to ask the subject for explanations of what he did or to expect him to understand the causes of his behaviour (Nisbett and Wilson 1977). For we are now asking him for inferences, for theories and not for a description of what happened to him from his own particular standpoint. It is important no to confuse research into the views held by the subject, his spontaneous representations, his

explanations of the world and his cognitive functioning, on the one hand, and testimony regarding what happened in a particular moment of his lived experience, that is, experience lived out within the limits of what can be brought to conscious awareness and what he is capable of expressing, on the other. By the same token, the object of research, as it presents itself to the researcher who not very well undertake research into a causal connection or the evidence for a particular mechanism must not be confused with the object as it presents itself in the lived experience of subjects and with regard to which therefore the subject can only describe that he has lived through.

However, it is obvious that one is not in control of what the subject is going to verbalise, even if one accompanies his activity in an expert manner ands precisely because one is interested in descriptions one does not, in the treatment of the data, give the same weight to description that one gives to commentary, judgment, the spontaneous expression of theories. But might well ask whether this precaution is not pointless to the extent that any expression in a natural language, even if it is intentionally descriptive, is upheld by a horizon of interpretations of which the subject is not conscious? This is a powerful objection and one that can not be evaded. But perhaps one can relativise its effects by relating them to different frames of reference: 1/ even while an interviews is going on one can easily construct a scale separating descriptive language (relative to our culture at this time) from what immediately appears as an interpretation, an abusive generalisation or the expression of a judgement rather than a fact. On this basis, it becomes possible to push towards a verbalisation which furnishes the more factual descriptive elements contained in a process of nomination or in an excessively global action verb. Contrary to Titchener's techniques aimed at forming students to verbalise only highly refined and basic descriptions, it is possible to collect every type of verbalisation and to make use of them as the point of departure for more appropriate descriptions. 2/ the gathering of second person data makes it possible to compare the variety of responses due to inter individual differences and so to bring to light the presuppositions of a particular description, and the result is the same when one compares one's own data with that obtained by other teams; 3/ finally, and to varying degrees, each passing year makes it possible to go back over the data previously registered and to take account of the presuppositions inherent in the doxa of that epoch.

The emphasis placed upon verbalisations and the need for an interview technique underscore the inter-subjective framework of second person research at the very moment in which access to lived experience (reflecting act) is sought and in which descriptive verbalisations of this experience is obtained. Cognitive psychology seems to have wanted to conceal the fact that this intersubjective dimension, linked to the mediation needed to accompany the subject in his effort to gain access to his own subjective experience and to thematise it, requires that the researcher should be trained not only in the "techniques" but also in developing the kind of personal relation without which the techniques can not be used effectively. Introspection requires that the "subject" of cognitive psychology be treated as a person and that, in consequence, the researcher should also be trained at this more personal level.

Conclusion

What I have tried to do is to justify introspection as a practise, to take account of successive improvement in the procedure and even to propose a certain number myself. In attempting to do this I have had to ignore a great many problems, a great many authors. I have tried to lay out the general lines of a regulated methodology, one which can certainly be improved but only on condition that it is actually employed.

Introspection is difficult; it is a technique; it demands an apprenticeship, requires the progressive development of a genuine expertise.

And worst of all, the technical side of introspection is concealed; it can be overlooked on account of the apparent ease with which it is possible to obtain at least some information about our states, our thoughts, our emotions, a facility which proves fallacious just as soon as one attempts to provide true descriptions and to gain access to subjective experience in a stable and precise fashion. But no more than looking at a garden gives on the ability to be a gardener or a botanist to be familiar contact with one's own states does not give us the competence of a phenomenologist or a psychologist. Piaget (1953 p. 282-286) was remarkable accurate when he pointed out that knowledge of the "internal" world is not given to us in a way essentially different from that of the world of objects. In both cases there is a construction on the basis of the interaction between the subject and the world, between the subject and himself.

The first improvement in the use of introspection has been to pass from the first person point of view in which subject and observer can not be distinguished to a second person point of view where several subjects distinct from the researcher are studied. Today, I would add the rider that the researcher ought to have an in-depth personal experience of the practise of introspection, that he should have a real familiarity with the structure of his subjective experience relative to his object of research and in such a way as to be able to control his implicit projections upon the experience of others. This "rite of passage" imposes an obligation to work on verbalisations and, even more obviously, poses questions concerning techniques relative to their production, to their collection, to the ways in which one can help in developing these verbalisations which I think about, personally, in terms of interviewing techniques. The second improvement has been to control the framework, in other words, to define a task, to specify the instructions, to standardise the transitions, to gather complementary and independent traces. The third stage seems to me to rest on the development of the dimension of "meta-reflection", by applying introspection with a view to improving our understanding of it. This is what we are presently working at. The line of thought we are presently pursuing is that of learning to appreciate the originality and the importance of reflecting activity. Introspection is based upon this reflecting activity, but so is the phenomenological reduction as well as the intuitive acts analysed by C. Peugeot. On the one hand, this result is a way of showing how examining attentively the practise by means of which one gains access to subjective experience leads one to an important question with regard to consciousness envisaged as an explicit becoming conscious 'of. On the other hand, this reflecting activity brings to light another field of data. For we can no longer allow ourselves to be confined within the dichotomy sub-personal/ phenomenological consciousness but must be open to the possibility of interposing between these two a whole host of non conscious information (and not even at the level of reflected consciousness) but information which can nevertheless be brought to full conscious awareness. Becoming conscious and becoming capable of verbalisation presupposes a procedure, a suspension of one's habitual attitudes, a modification of the quest for information, a semantic suspension whereby the process of putting into words is subordinated to that of being open to experience. In short, a

process of guidance which is something other than a set of instructions. After all, subjective experience is certainly a fact of personal life. Perhaps we need a more refined theory and practise of intersubjectivity?

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