

Describing one's subjective experience in the second person
An interview method for the science of consciousness

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Abstract

This article presents an interview method which enables us to bring a person, who may not even have been trained, to become aware of his or her subjective experience, and describe it with great precision. It is focused on the difficulties of becoming aware of one's subjective experience and describing it, and on the processes used by this interview technique to overcome each of these difficulties. The article ends with a discussion of the criteria governing the validity of the descriptions obtained, and then with a brief review of the functions of these descriptions.

Key words: subjective experience, pre-reflective experience, pre-reflexive experience, consciousness, second person, first person, interview method, phenomenology

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Introduction: problematic

Until recently subjective experience was excluded from the field of scientific investigation: data were said to be scientific only if they were identically reproducible and gathered by a neutral and objective observer external to the object of his study. This is particularly the *credo* of classical, experimental psychology, which is based solely on so-called third person data, i.e. those that are collected by an external observer or experimenter. But a small but growing group of cognitive science researchers have recently come to the conclusion that in order to study cognition one can no longer limit oneself to data that can be observed and recorded from the outside, and that it is essential to take into account its subjective dimension, as it is lived from the inside.¹ The reason for this is clear: the description of a cognitive process in the first person, i.e. as the subject experiences it, is far more precise and rich than an indirect description. But curiously it is above all the development of increasingly sophisticated cerebral neuro-imaging techniques which has triggered this realisation: this is because the data resulting from these techniques can usually not be interpreted without a description of the subjective experience of the subject whose activity is recorded.

This initial realisation – the necessity of taking into account the subjective experience of the subjects studied – was soon followed by another: describing one's own subjective experience is not a trivial activity, but on the contrary extremely difficult. Why is this? Because a substantial proportion of our subjective experience is beyond our consciousness. How many of us would be able to precisely describe the rapid succession of mental operations he carries out to memorise a list of names or the content of an article, for example? We do not know how we go about memorising, or for that matter observing, imagining, writing a text, resolving a problem, relating to other people... or even carrying out some very practical action such as making a cup of tea. Generally speaking, we know how to carry out these actions, but we have only a very partial consciousness of how we go about doing them. Our most immediate and most intimate experience, that which we live here and now, is also that most foreign to us and the most difficult to access. Turning our attention to our consciousness, and *a fortiori* describing it, calls for an inner effort, a special kind of training, a specific kind of expertise².

A growing proportion of the scientific community has thus come to the conclusion that it is essential to develop rigorous methods enabling the very precise study of subjective experience, in order to train researchers and the subjects studied. To construct these investigation methods, Buddhist techniques of exploration of inner experience, which have been tested and refined over twenty-five centuries by many generations of meditators, provide us with invaluable paths and elements. But mastering meditation techniques requires intensive training for several years. Furthermore, these techniques have been devised to enable us to become aware of very profound dimensions of our subjective experience, but not necessarily of all our cognitive processes, in all their dimensions and all their details. Lastly, they are not intended to produce a *verbal description* of the experience, which requires a very special kind of expertise. For all these reasons, the participation of an experienced meditator in the first person data gathering protocols is not always possible, or sufficient.

This article proposes and presents an interview method which enables us to bring a person, who may not be trained, to become conscious of his or her subjective experience, and describe it with great precision. This therefore is a method enabling the gathering of "first person" data, i.e. data that express the viewpoint of the subject himself, in the grammatical form "I...". But as these data have been gathered through another person (a "You"), it has been dubbed a "second person" method (Varela & Shear 1999b).

The article is focused on the difficulties of becoming aware of and describing subjective experience, and the processes used by this interview technique to overcome each of them. Although these difficulties are interconnected, and the processes implemented are closely intertwined, I will set them out individually in turn, in an attempt to clarify this complex issue.

I will end the article with a discussion of the criteria governing the validity of the descriptions obtained, and then with a brief review of the functions of these descriptions.

Sources of the method and the contexts of its use

This article sets out to be rooted in reality: it is not intended to be an abstract reflection on the conditions governing the possibility of a description of subjective experience, but rather an exposition of the practical difficulties we come up against in our attempts at explicitation, and of the processes that may be implemented to resolve them. I try to describe an experience, the experience of relating to what one has oneself lived. This aim will lead me, throughout the article, to refer to the work of researchers who in turn have set out to look at this type of

experience, and have:

- highlighted the pre-reflective dimension of subjective experience
- described inner gestures enabling the act of becoming aware and the act of description
- developed processes which can help another person perform these gestures in the course of an interview
- forged terms enabling precise reference to be made to these gestures: conversion, evocation, direct reference, attention position, speech position, etc.

Thus, in the course of this text I will evoke Husserlian psycho-phenomenology, Piaget's theory of becoming aware, "affective memory" theories (Ribot, Gusdorf), and the work of James and of Titchener. I will refer to the practices of many psychotherapists who have invented speech acts that can enable another person to become aware of his lived experience and describe it (such as Carl Rogers or Milton Erickson). I will describe certain processes of "Focusing", a psychotherapeutic method created by Eugene Gendlin, whose basic principle is to bring the patient into contact with the dimension of subjective experience that is felt through the body, or "felt meaning" (1962/1997 and 1996)³. I will describe some of the techniques of the Neuro-Linguistic Programming (NLP) "modelling interview", which helps the interviewee discover the internal cognitive processes or "strategies" he uses, in order to improve or to appropriate them. Throughout this text, I will draw very heavily on the highly detailed psycho-phenomenological analyses made by Pierre Vermersch of the various gestures which make it possible to switch from pre-reflective consciousness to reflective consciousness and on the method he has developed, the explicitation interview (1994/2003)⁴, from which many of the processes I describe have been derived.

Lastly, I will refer to the mindfulness practice (*samatha-vipasyana*), a set of meditation techniques⁵ derived from Indian Buddhism which initially make it possible to learn how to stabilise one's attention, and then in a second phase to observe the flow of one's subjective experience in order to find out its structure.

I have checked the accuracy of the descriptions I refer to, and the efficacy of the processes I describe, in two ways: 1) by myself, in the first person, in my own experience, which is as we shall see later the final validity criterion for a description⁶, and 2) in the second person, in various contexts in research and training.

The first context was a research study looking at the subjective experience that accompanies the appearance of an intuition, defined as "knowledge that appears without the

intermediary of deductive mechanisms or the usual senses". I thus gathered a description of a variety of intuitive experiences by means of interviews. I was then able, by analysing and comparing these descriptions, to point to a highly detailed succession of states and inner gestures, which proved to be strikingly similar from one experience to another and from one subject to another, in other words a generic structure of intuitive experience (Petitmengin 1999 and 2001).

I then used these techniques as part of a "neuro-phenomenological" research project on the anticipation of epileptic seizures (Le Van Quyen and Petitmengin 2002, Petitmengin 2005a). A team headed by Francisco Varela, had just detected subtle changes in cerebral activity a few minutes before the start of an epileptic seizure, thanks to non-linear EEG analysis tools and then to synchrony analysis tools (Martinerie *et al.* 1998, Le Van Quyen *et al.* 2001a and 2001b). The problem that was then facing me was as follows: do these neuro-electrical modifications correspond to modifications of the subjective experience of the epileptic subjects, and if so, to which ones? To attempt to answer this question, I used the same "second person" method, to obtain from epileptic patients a description that was as detailed as possible of their preictal experience, in order to reveal the dynamic structure of the experience and identify any regular feature.

Lastly, I have been using this interview method in a teaching situation. For almost ten years now, I have been training various groups of students with 5 years of studies after the high-school leaving certificate, who are on the threshold of their professional life: they are future psychologists or knowledge managers. The aim is to enable these students to gain consciousness of their own cognitive processes, and to make them explicit, so that they can then use this technique in their professional practice.

1. Why is it so difficult to become aware of our subjective experience?

1.1 Dispersion of attention

The first reason we have difficulty in becoming aware of our subjective experience is that we find it very hard to stabilise our attention. This can be easily shown if we try to focus our attention for example on an inner image (I imagine an apple, a tulip, an elephant, etc.), or even on an external image (my pen, the stone I use as a paperweight). After a very short period of time, a few seconds at most, thoughts spring up, for example memories linked to the

image or to the object that is my starting point, comments on the lived experience, or thoughts with no relation to this experience. Furthermore, these thoughts will absorb me to such an extent that it will take me a certain time (several minutes in some cases) before I realise that my attention has strayed from its starting point, and that I have "drifted away". And at the moment this realisation occurs (if it occurs), I also realise at the same time that for the whole of this time, I was not aware that my mind was wandering, that I was distracted but was not aware of it⁷. Thus during the writing I am carrying out, I often "drift away", and realise sooner or later that my mind was busy doing something quite different from writing. Even more frequently, I find myself starting to write again without even having realised that I had been momentarily distracted: in other words, at no point in time did I realise that my attention had strayed from what it should have been focused on. This means not only that we have considerable difficulty stabilising our attention but also that in general we are not even aware of this difficulty. It requires specific circumstances, or appropriate training, so that we can become conscious of the extremely fluctuating nature of our attention.

1.2 Absorption in the objective

The second reason why we have difficulty gaining an awareness of our subjective experience is that even at moments when our attention is concentrated on a given activity, we are entirely absorbed by the objective, the results to be achieved, the "what", and not or only very slightly aware of the way in which we try to achieve this objective, that is the "how". For example, while writing these lines, I am completely absorbed by my objective, which is to express a chain of ideas as clearly and precisely as possible. But I have very little awareness of the internal processes that enable me to achieve this objective. To gain this awareness, I have to divert my attention from the objective itself, towards the processes that enable me to achieve it. I first become aware of the contact of my fingers on the pen, tensions in my back, and then a rapid succession of inner images, judgments and comparisons, light emotions, etc., which constitute my activity of writing, and which are usually concealed because my attention is absorbed by the objective to be achieved. And at the same time, I realise that a few instants earlier, I was not aware of my way of writing, that a significant part of my activity was eluding me. I was aware that I was writing, but "in action"⁸, in an "unreflective", "pre-reflective"⁹, or "direct"¹⁰ way.

This strange characteristic seems to apply to all our cognitive processes: to read, write, imagine, calculate, observe, listen, etc., we make use of processes that are precise, but which

largely elude our consciousness. This pre-reflective nature does not necessarily impair their efficacy: as Piaget has shown, we do not need to know how we carry out a physical or mental action in order for it to be successful: our know-how is "remarkably efficacious, even if it is not aware of itself" (Piaget 1974a, p. 275). The depth of this pre-reflective, implicit part seems to be proportional to the level of expertise (Dreyfus 1986): the more a person becomes an expert in a given field, the more his know-how becomes personal, embodied, remote from knowledge which can easily be transmitted in the form of concepts and rules which more often characterise the novice (although a proportion of pre-reflection seems to be present whatever the degree of expertise). This implicit skill, which Polanyi, stressing its intransmissible nature, terms "tacit " (Polanyi 1962 and 1966), is the product of implicit learning (Reber 1993, Perruchet 2002), and it evolves, and is adjusted by means of an implicit mode of reflection, a reflection-in-action (Schön 1983). The most surprising thing is that not only do we not know what we know, but that we do not know that we do not know, i.e. we are not aware of being unaware, which is the first obstacle in the way of becoming conscious: why should I set myself the task of acquiring a consciousness which I am not aware that I lack? As our cognitive processes are the most personal and intimate things about us, we think we are familiar with them, and cannot imagine for a moment that any particular inner effort should be necessary to become aware of them.

This lack of reflective consciousness is different from the absence of consciousness resulting from the inner wandering of the mind that was described in the previous paragraph. Let us return to our example: in the second case, I am aware that I am writing, but am entirely absorbed by my objective, and not reflectively aware of the means I am employing to achieve the objective. In the first case, I have totally lost consciousness of my initial activity (writing), my attention is absorbed by my inner wandering (imaginary dialogues, images and associated emotions, etc.) without my having any reflective consciousness of this wandering. Not only am I not aware of this wandering, but also, as for my writing processes, I am not aware of the means I am employing to carry out this wandering (e.g. precise characteristics of my mental images, or the way in which I construct them). I am therefore in a way doubly unconscious. Another difference is that when I realise that I have "drifted away", I can sometimes manage (if I make a certain degree of effort) to reconstitute the course of my thoughts during this episode of absence. Whereas on my own, it is very difficult for me to become conscious of my pre-reflective processes involved in writing or imagining. These two types of lack of

consciousness are often confused. As we shall see, the processes used to overcome them are different.

1.3 Confusion between experience and representation

The third difficulty is as follows: not only do we not know that we do not know (how our cognitive processes take place), but we *believe* that we know, i.e. in many cases we have a mistaken representation of our cognitive activity, a representation to which we hold very firmly, which makes it all the more difficult to become conscious of how it has actually taken place. In most cases, this mistaken representation is learned, and corresponds to beliefs that are specific to a given cultural milieu. It is in large part conveyed and strengthened by our language, and particularly by the metaphors we use, which have the power to very deeply structure our experience. The tenacity of our representations and beliefs has two different effects:

(1) a deforming effect: surreptitiously, we substitute for a description of the experience itself a description of our representation of this experience. Just as someone who spontaneously draws a table, draws it as he knows it is: rectangular. In fact, he must learn to see the table as it really appears to him, that is like a deformed parallelogram (Vermersch 1997b, p.7)

(2) a concealing effect: when certain dimensions of our experience do not match up with our representation or our understanding, they are discarded from the field of our consciousness, or "repressed". As Piaget has pointed out, we only perceive what we understand: "The reading of observables depends on understanding and not on perception. (...) Becoming aware and understanding seem to necessarily support each other."(Piaget 1974a, p. 188)¹¹

For example, the whole of medical discourse on epilepsy¹² is underpinned by the belief that seizures are sudden, that they cannot be anticipated or prevented by the patient. We have observed that this belief considerably hampered the awareness and the description by the patient of the preictal symptoms that could enable him to anticipate and manage his seizures.

When a person tries to describe the way in which he or she carries out a cognitive process, the person usually begins by describing his representation of the process, what he believes he is doing, or what he imagines he is doing. It is also often the case that the person moves towards judgments, assessments, or comments on the carrying out of the process (such as "it was difficult" or "it went well"), or theoretical knowledge or explanations about the process in

question. All this data may be of some value, but it does not give us any information about the way the person really carries out the process. A particular effort is necessary for the person to gain access to his or her experience itself, which lies underneath his or her representations, beliefs, judgments and comments. To carry out this task, guidance is useful.

1.4 On what dimensions of the experience should one's attention be directed?

As Titchener has observed, the main difficulties of introspection are "maintaining constant attention" and "avoiding bias". But, he added, a further difficulty which is by no means the least significant is "to know what to look for" (Titchener 1899, pp. 24-25). Our deep misunderstanding of our own experience means that we do not know towards which dimensions of our experience our attention should be directed. The difficulty is rather like that facing a biologist who is still a novice: it is not enough for him to have a high quality microscope if he does not know how to use it. Without training, and in the absence of detailed theoretical knowledge, he does not know what to look for, and he is unable to recognise what he has in front of his eyes. Scientific observation with a microscope is a skill that has to be learnt. The same applies to the observation of subjective experience: without training and without detailed meta-knowledge on the various dimensions of this experience, we are in a sense, blind.

With the help of appropriate training, such as that provided by the practice of *samatha-vipasyana* meditation, it is possible to discover alone the various dimensions of one's own experience. As months go by, the meditator becomes aware in succession, and often with amazement, of the various strata that constitute the fabric of his subjective experience. Usually the meditator is at first surprised by the scale of his or her interior discussion, this "silent dialogue of the soul with itself" which Plato said was thought itself (*The Sophist* 263e). The meditator then discovers, accompanying this almost uninterrupted murmuring that is "buzzing with words" (Gusdorf 1950), a rapid flow of inner images and "films" that are called up from the memory or constructed: recent or distant memories, which may be pleasant or traumatising, future scenes that are either feared or desired, are played out in the inner being without interruption. This inner imagery is accompanied most of the time by emotions of varying degrees of intensity. The images and emotions themselves cover an even deeper layer that is hard to access, that is silent, in which the frontier between myself and other people, between the inner world and the outer world, and between the various sensorial modalities, is far more permeable (Petitmengin 2005b).

In addition to these various "strata", the meditator also gradually becomes aware of the temporal and dynamic dimensions of his or her experience, i.e. the rapid succession of inner operations - comparisons, tests and diagnoses - which constitute the incessant flow of his subjective experience.

But without training, we only have in the most favourable cases a partial and vague consciousness of these various dimensions. Our subjective experience, although very precisely structured, seems to us as confused as a first draft. Often indeed we are quite simply unaware of the existence of these various dimensions. Many people I have interviewed have discovered on this occasion the importance of their inner dialogue, and many had no reflective consciousness of their inner images. The threshold of perception of our physical sensations is usually very high, and we perceive only the most intense emotions, pain and pleasure, with the whole range of more subtle feelings remaining generally unperceived.

To access each of these dimensions, a particular "position of attention" is required. This is illustrated by a remark by James:

"Suppose three successive persons say to us: 'Wait!' 'Hark!' 'Look!' Our consciousness is thrown into three quite different attitudes of expectancy, although no definite object is before it in any one of the three cases. Leaving out different actual bodily attitudes, and leaving out the reverberating images of the three words, which are of course diverse, probably no one will deny the existence of a residual conscious affection, a sense of the direction from which an impression is about to come, although no positive impression is yet there. Meanwhile we have no names for the psychoses in question but the names hark, look, and wait." (James 1890, p. 251)

In the same way, depending on the inner dimension that I wish to explore (visual, auditive, feeling, etc.), I must not only turn my attention from the outside to the inside, but also adopt a different "waiting position" or "attention position", characterised by its centre (a particular part of the head or body, etc.), its radius (focussed or panoramic), and its mode (tense or receptive). These different attention positions, which enable awareness of the various dimensions of one's subjective experience, can be learnt. In the interview setting, the mediation of an expert who guides the subject in these various positions, because he has a meta-knowledge¹³ of these dimensions and the way in which access may be gained to them, considerably facilitates the learning process.

1.5 Down to what degree of precision should we take the observation?

If we are not quite simply unaware of a dimension, the awareness we have of it is usually

blurred and approximate. We must learn to adjust the lens of our psychological microscope to observe it with precision and in its details. Whether it is a matter of the visual, auditive or kinesthetic dimension of our experience, or its dynamic dimension, this precise kind of observation not only requires us to have sufficiently stabilised our attention on this dimension, but also that we should have a certain knowledge of the degree of precision it is possible to, and which we wish to achieve. Here also, the mediation of an expert interviewer who, guided by his knowledge of the descriptive categories of these various dimensions, encourages the subject to go down in the scale of precision of description to a depth of which he has not even conceived, is extremely facilitating.

1.6 Real-time access is impossible

The sixth difficulty is that we have no other solution than accessing the experience to be described with hindsight, after a period of time of a greater or lesser length. This is the case when for reasons of research we look at a past experience that can not be reproduced: for example, the emergence of a new idea, or sensations preceding an epileptic seizure . But even in the most favourable case, i.e. if the experience can be reproduced at will, it is usually impossible for us to describe it as it is taking place; we can only describe it retrospectively for several reasons.

- First, because of the rapidity of the process. For example, when I spell a word, or when I memorise a matrix of figures, the operations are so numerous and so rapid that it is impossible, even with intensive training, to observe them at the very instant I am performing them. This was remarked on by James:

"The rush of the thought is so headlong that it almost always brings us up at the conclusion before we can rest it. Or if our purpose is nimble enough and we do arrest it, it ceases forthwith to itself. (...) The attempt at introspective analysis in these cases is in fact like seizing a spinning top to catch its motion, or trying to turn up the gas quickly enough to see how the darkness looks..."
(James, 1890, p. 244)

In order to become conscious of the carrying out of the process, I must re-enact it, play it out again in an inner way. And I must in fact re-enact it *several times*: for the first time, I can only identify the main phases of the process. I must re-enact each of its phases in turn in order to describe them, in the form of a set of operations, which I must in turn re-enact to access a level of greater detail, and so on until I reach the level of detail required.

- The complexity of the process also plays a role. It is impossible for me to focus my attention on all its dimensions (visual, auditive, kinesthetic, emotional, etc.) at once. I must re-enact it in an inner way several times, focusing my attention each time on a different dimension.
- But the rapidity and complexity of the flow of experience are not the only explanations for the necessity of retrospective access. The main reason is that it is impossible for us to direct our attention at one and the same time onto the "what" and the "how", onto the object of the process and the way in which we carry it out. For example, the content of an image and its mode of appearance constitute two different attention contents, which require two modes, two orientations and two different attention "positions". After having given myself an inner image, if I want to become conscious of the mode of appearance of the image, I must "re-enact" the initial emergence of the image while directing my attention differently. This was remarked on by John Stuart Mill more than one hundred years ago:

"A fact may be studied through the medium of memory, not at the very moment of our perceiving it, but the moment after: and this is really the mode in which our best knowledge of our intellectual acts is generally acquired. We reflect on what we have been doing when the act is past, but when its impression in the memory is still fresh." (Mill 1882/1961, p. 64)

In any case, this retrospective access is not trivial. Even when an experience has just finished, its "re-enactment" or "presentification" is a complex cognitive process which requires training and learning, and can be considerably facilitated by the assistance of an expert person.

1.7 Putting it into words

A further difficulty arises in putting the experience into words. The vocabulary at our disposal to describe the various dimensions of our subjective experience is very poor, and this poverty can probably be put down to the fact that in our culture it has been little explored. For example, we have no precise words to describe synesthetic sensations, or the subtle internal processes that enable us to redirect our attention to the interior, to stabilise it, to make ourselves attentive to a specific dimension of our experience, to very rapidly compare a present sensation to a remembered sensation. Furthermore, as Schooler asks (2002), does not verbalisation itself introduce a disruption, a "verbal overshadowing" into the described experience?

2. Interview processes

Unstable attention, absorption in the objective, escape into representation, lack of awareness of the dimensions and level of detail to be observed, impossibility of immediate access - all these reasons explain why spontaneously gathered first person descriptions are usually so poor (as pointed out in Nisbett & Wilson 1977 and Lyons 1986). What processes can be used by a trained expert leading an interview to overcome these difficulties, to enable the interviewee to bring into his consciousness his subjective experience and describe it?

2.1 Stabilising attention

First of all, the setting of the interview (which it is important to state at the start of the interview, or to restate if it has been defined in advance) will help to maintain the subject's attention on the experience to be explored: "We are here together for a given time, with a specific objective, which is to gather a description of this particular experience". This setting makes the stabilisation of attention much easier than if the subject tries alone to describe his experience. The interview situation and the mere presence of the interviewer, will throughout the interview act as a "container" for the attention of the interviewee, and help him to remain within the boundaries of the experience being explored.

The setting however is not enough to prevent the subject from escaping from a description of the experience into comments, assessments and judgments about the experience, or digressions relating to the concerns of the moment, which are increasingly distant from the experience explored. Complementary processes are therefore necessary to make the subject stabilise his or her attention. One of these processes, derived from the Focusing method, is to encourage the subject at the start of the interview to leave aside the cares that burden him in order to clear an inner space. The aim is not to discard them, but to authorise oneself to lay down this burden for the duration of the interview, to take the time to enter into a relaxed relationship of contact with the experience to be explored.

A third process which can help the subject to stabilise his or her attention is the regular reformulation of what he or she says: each time there is a digression, the interviewer repeatedly and unceasingly reformulates all the descriptive elements gathered concerning the experience itself, which effectively refocuses the subject's attention on the experience. Furthermore, each time there is a reformulation, the interviewer asks the subject to check the accuracy of what he or she has said: to carry out this check, the subject's only solution is to go

back to the experience. For example:

"I am often going to repeat what you say to me, which will enable you to check that I have understood you correctly, and whether anything has been left out. Don't hesitate to interrupt me. So if I have understood you correctly, you began by taking consciousness of the dissertation subject by reading it on the board, and then you said to yourself that it would be easy. And so you remembered a lesson that was precisely devoted to this topic (...)."

A fourth process consists - each time that the subject drifts away from a description of his experience to make comments or judgments about his experience, or has become lost in even more distant considerations - of asking a question that brings him back, firmly but not brutally, to the experience itself. For example:

"This dissertation was a complete failure and you were disappointed. You said to yourself that you could have done better. I understand your disappointment and what I am proposing to you is to analyse the way you went about writing it. How did you begin?"

A fifth process is the use of the "direct reference" (Gendlin 1962): this consists of encouraging the person interviewed, when a feeling or an inner operation which is still vague and blurred, difficult to stabilise, begins to emerge from the interviewee's consciousness, by designating it with a highly generic term, such as "this feeling, "that", "this strange thing". These symbols act as pointers to the feeling, they isolate it from the flow of experience, they are like handles which help us to maintain the feeling or the inner operation and stabilise attention on it. This pointer role can be played by a word or a group of words, or also by a non-verbal, visual or kinesthetic symbol. For example, before the interviewee even becomes conscious of a feeling or an inner operation, he or she often designates it by a gesture. The interviewer may make use of this gesture to help the person to become conscious of this feeling or operation, and then to hold attention on to it.

2.2 Turning the attention from "what" to "how"

Becoming aware of the pre-reflective part of our experience involves a break with our customary attitude, which tends to be - as we saw earlier - to act without being conscious of the way we are going about it, without even being conscious of this lack of consciousness. We need to turn attention from "what", which usually entirely occupies the person, to "how". This redirection of attention is sometimes triggered by an obstacle, or a failure, but may also be the result of training and learning. This is in fact precisely the Husserlian "phenomenological conversion", which consists of diverting attention from objects which

appear in the consciousness in order to direct attention at the subjective modes of appearance of these objects (Husserl 1913/1950, 1925/1962). Attention is moved from the perceived object to the act of perceiving, from the imagined object to the act of imagining, but also from the object of the memory towards the act of remembering. This conversion of attention from the content towards the process, which makes it possible to move from direct consciousness to reflective consciousness (Vermersch 2000a), can be carried out for all activities, from the most widely practised (imagining, memorising, remembering, observing, solving a problem, but also relating to other people), to the most specialised activities, which are specific to a particular field of expertise.

To explain this conversion movement to participants in an explicitation interview training session (Vermersch 1994/2003), the instructor suggests that each of them carries out a simple task: spelling a word, memorising a list of words or a matrix of figures. Once the task has been completed, they are asked to describe how they went about carrying out this task. Generally speaking, the students have no difficulty in carrying out the task as instructed. It is quite different when it comes to describing how they went about performing the task: the assistance of an interviewer is then essential to help them to turn their attention away from the content (which for example may be memorised) to the act (of memorisation). It takes at least one hour to decrypt a task which it took one minute to carry out.

I thus propose in the annex (Appendix 1) to this article an excerpt from an interview in which the interviewer, after asking the interviewee to "think of an elephant", enables the interviewee to shift his attention from the image obtained (of which he would probably easily have obtained a description), towards the modes of appearance of the image, by gradually exploring the visual, auditive and emotional dimensions of the experience. This interview excerpt offers the advantage of highlighting the great variety of internal operations, most of which are pre-reflective, which follow one after the other during the three seconds it takes to perform this everyday task (a variety which may well surprise a reader never having participated in such an explicitation experiment).

Throughout any interview of this type, it is the question "how" which triggers the conversion of the attention of the interviewee towards his pre-reflective internal processes, and the awareness of these processes. This may be contrasted with the question "why", which directs the attention towards a description of objectives and abstract considerations, and must therefore be avoided. For example:

- What happened when I asked you to spell the word "gazelle"?

- I read the letters in the word.
- How did you read them?
- I saw the word in my head.
- What did you see exactly, what was this word in your head like?
- Etc.

If the interviewee nonetheless remains absorbed by the description of the objective, appropriate questions can be used to help him turn his attention away from the objective to the processes implemented to achieve it. For example: "And to achieve this aim, what do you do precisely? How do you begin?" Or alternatively: "How do you know you have achieved this aim", "How would you recognise that the aim has been achieved?"

Note that the technique sometimes recommended to gather the description of a cognitive process, consisting of asking the interviewee to "think aloud" while performing the task requested (Ericsson & Simon 1984/1993, Ericsson 2003) does not induce the redirection of attention from "what" to "how", and thus the awareness of the pre-reflective dimension of the process studied. This technique enables at best the gathering of the interviewee's internal monologue during the carrying out of the task: this monologue, which is usually limited to the judgments and comments that the interviewee utters about the task in progress, represents only a small part of his activity.

2.3 Moving from a general representation to a singular experience

In order for the interviewee to carry out this conversion of attention, and describe what he is really doing, and not what he thinks or is imagining he is doing, it is essential to help him to shift from a general description to a description of a particular situation, which is precisely situated in time and space. No-one has an experience "in general". A lived experience is necessarily singular. "A lived experience which is not a singular moment in the life of a given person is not a lived experience" (Vermersch 1997b, p. 8, 1997a). If you ask the interviewee: "How do you do that?" (spell a word, memorise something), it is almost certain that you will obtain a very general description, corresponding to the representation that he makes of what he is doing. Without even realising that this distortion is taking place, he or she will describe to you the rules he has learnt, and his theoretical knowledge about the cognitive process in question. He will give you an abstract description, which is considerably impoverished, in which the pre-reflective dimension of the lived experience will not feature. The aim is to take

the person from a general description, a definition or an explanation (such as "My ideas always come to me when I don't look for them any more, when I am relaxed, usually when I'm walking") to the description of a singular experience:

"Just at this time I left Caen, where I was then living, to go on a geologic excursion under the auspices of the school of mines. (...) Having reached Coutances, we entered an omnibus to go some place or other. At the moment when I put my foot on the step the idea came to me that the transformations I had used to define the Fuchsian functions were identical with those of non-Euclidean geometry." (Poincaré 1947)

It is only by helping the interviewee to identify a singular experience that you have a chance (if you then pose the right questions) of enabling the interviewee to become aware of the pre-reflective dimension of his experience, and describe it. The more the interviewee is in contact with a specific and genuinely lived experience, the lower is the risk of his description sliding surreptitiously towards that of a general representation. The choice of a singular experience is therefore an essential stage in the interview¹⁴.

How to choose a singular experience

There are three basic cases:

1) If the cognitive process explored is easily reproducible, the researcher could devise a protocol enabling the interviewee to carry out the process here and now, and then just afterwards enable the person through questions to describe how he went about performing the process. This is the case in explicitation technique training: we propose a variety of cognitive tasks to the students (memorisation, observation, imagination, problem solving) and they then explicate them just after performing them. This is also the case in some neurophenomenological protocols, which consist of having an interviewee carry out a cognitive task, while recording his EEG, for example the 3D vision protocol developed by Antoine Lutz (2002): the description of subjective experience can be gathered immediately after the task is performed.

2) If the experience studied cannot be reproduced at will, the researcher must help the interviewee to find in the past a particular occurrence of this experience. This is what I did in my research on intuitive experience: enable the interviewee to find the exact moment of the new idea's emergence, of the therapeutic insight, of the poetic inspiration. I found this difficulty amplified in connection with the neurophenomenological study on the anticipation of epileptic seizures: because of the unforeseeability of the seizures, the description of the

preictal period through an interview can only be performed at a distance from them. Furthermore, not all the preictal periods can be described. The seizures are in fact often nocturnal: the patient is then unconscious during the preictal period. And even if the seizure takes place during the daytime, it often obliterates all memory of the preceding moments, and sometimes even the memory of having had a seizure. The choice of a seizure on which it is possible to work is therefore an important and delicate moment of the interview.

3) If moreover the process studied has lasted for several hours or several days, one or several specific moments must be selected. For example, if a preictal feeling which is at first barely perceptible becomes amplified for several hours before the seizure takes place, or if a new idea which is at first vague and fuzzy takes several months to mature, it is necessary to identify some characteristic or decisive moments on which the explicitation process can be concentrated.

How can the subject be directed towards the singular experience

Whether the process studied has been experienced just a few instants or a few years previously, the interviewee often attempts to escape into generalities, i.e. he moves surreptitiously from a description of the singular experience he has lived to a description of the representation that he makes of it, or to an exposition of his theoretical knowledge about the subject. The following quotation, taken from an interview concerning the sudden emergence of a new scientific idea, illustrates this shift (shown in italics) which is often observed during interviews:

"I have an image in my head at that point. *For I belong to the category that mathematicians call geometers, people with visual intuition, unlike algebraists. People like that need to construct a figure for themselves to solve the problem raised...*"

The interviewer then needs to demonstrate a great deal of determination and delicacy to bring the interviewee back inside the limits of his own experience. He is often forced to interrupt him, and then, after carefully reformulating his words to show him that he has been listened to and in order not to break the relationship of trust established, to bring him back firmly to the evocation of his experience, by a prompt of the following type:

"So therefore because you belong to the category of geometers, you have at that moment an image in your head. Let's look at this image again. Can you describe it to me? How big is it?"

2.4 Retrospectively accessing the lived experience

Whether the experience explored has been lived just a few instants or a few years previously, retrospective access is necessary, as we have seen. The interviewer must therefore direct the interviewee towards the "re-enactment" of the past experience. This technique is the key of the Neuro-Linguistic Programming modelling interview, and of the explicitation interview. As Vermersch explains it (1994/2003), its theoretical model is that of the affective memory or "concrete memory" (Ribot 1881, Gusdorf 1950), which more recently has been dubbed "episodic memory" (Cohen 1989) or "autobiographical memory" (Neisser 1982). This theory contrasts intellectual memory, based on conceptual knowledge, which is not linked to a specific lived experience, with affective memory, which enables the rediscovery of the past in all its freshness, all its carnal and living density. In concrete memory, we experience an immediate coincidence with the past, we relive the past as if it was present¹⁵. One of its main characteristics is to be involuntary, i.e. it does not occur on the initiative of discursive thought, but spontaneously, and usually through the intermediary of a sensorial trigger¹⁶. The memory cannot therefore be deliberately set off. But it is possible to indirectly prepare for its emergence by rediscovering the sensoriality linked to experience. For example, if I ask you: "What is the first thought you had when you woke up this morning?" it is quite probable that you would have no solution for recovering this memory other than returning in thought to your bed at the moment when you awoke.

In the context of an interview, to guide the interviewee towards a concrete evocation of a past situation or a situation that has just occurred, the interviewer helps him to rediscover the spatio-temporal context of the experience (when, where, with whom?), and then with precision the visual, auditive, tactile and kinesthetic, olfactory and possibly gustatory sensations associated with the experience, until the past situation is "re-lived", to the point that it is more present than the interview situation¹⁷.

The following excerpt is taken from an interview already referred to, concerning the instantaneous emergence of a new scientific idea five years earlier:

- What I propose that you do is return to this experience, in February 1997 in order to re-enact it as it were. So you are in your office, reading an article by Griffiths...
- In fact I am not sitting at my desk, but at a small table located just under the window.
- Just under the window then. What time was it, approximately?
- It was in the evening, between five and seven. There was light... the lamp on the little table was on.
- Was there any noise around you?
- No, it is silent, I am alone. I am reading the article. I read it rapidly, fluently, without taking

notes...

The transition to the present tense in the last part of the excerpt is one of the signs that the interviewee is in fact going back into the past experience. A set of clues of this type, verbal but also para-verbal (such as the slowing of the word flow) and non-verbal (the shifting and unfocusing of the eyes, i.e. the fact that the subject drops eye contact with the interviewer and looks off into empty space, off into the horizon), enables the interviewer to check the intensity of the evocation. The person is then in a very specific interior state, which can easily be identified by this set of objective criteria, but also by very specific subjective criteria. In this characteristic interior state which is termed "evocation state" in the explicitation interview and "association state" in the NLP modeling interview, the person is relating to his past experience. It is only when, thanks to these clues, the interviewer observes that the evocation state is sufficiently intense and stabilised that he can enable the interviewee, with the help of appropriate questioning, to turn his attention towards his inner processes and describe them.

Even if the experience one wishes to explore is very fresh, because it has just been carried out, the interviewer must precisely guide the subject towards an evocation of the start of the experience. In this case the task just completed consisted of "thinking of an elephant":

"What we're going to do together, now, is to go back in time, as though we had a video recorder. To do this, I want you to go back to the moment when I asked you: "Think of an elephant". I would like you to hear again my voice pronouncing these words..."

When the experience is carried out just before the interview for the purposes of research, it is advisable to insert into the protocol one or two markers or flags which will help the interviewee to return to the beginning of the sequence (oral or gestural intervention by the experimenter, a specific signal). If the start of the experience to be explored cannot be precisely identified, it is also possible to start from the end of the sequence. For example, to find any preictal sensations, it may be easier for the patient to return to the striking instant of the start of the seizure. The experience will then be re-enacted and described "in reverse".

Because of the instability of his attention, and his tendency to move from the singular to the general, it is however rare for the interviewee to remain in the evocation state throughout the interview. Sometimes an ill-advised question or reformulation on the interviewer's part, or an external noise, can be sufficient for the interviewee to lose contact with the past experience. When the interviewer observes that the interviewee is emerging from the evocation state, one of the processes enabling the interviewer to bring the

interviewee back into this state consists of reformulating the description of the sensorial context of the experience, or formulating questions about this context, to which the person cannot reply without referring to the past situation, without "going back to it", for example:

"So you're reading this article by Griffiths, sitting at your small table located just under the window, and your table lamp is on... Are you sitting comfortably? What temperature is it? Is it a journal article or an article in a book? Can you describe the document to me?"

2.5 Directing attention to the various dimensions of the experience

When the evocation is sufficiently stabilised, the interviewer can use appropriate questions to guide the interviewee towards becoming conscious of the various dimensions of his experience. One useful process consists of carrying out, before the interview begins, a small training exercise to raise the interviewee's awareness of these different dimensions. For example, encourage him to recall a memory of a holiday, and then to successively describe the visual, auditive, kinesthetic, emotional, olfactory and gustatory dimensions of the memory. During the interview itself, this training will help the interviewee put himself in the "attention position" required for becoming conscious of these different dimensions of his experience, encouraged by questions of the following type:

"As you read this article by Griffiths, what is happening in your experience? Make sure that there is not something else. As you read the words, perhaps you see something else? Perhaps you say something to yourself in an inner voice? Perhaps you experience a particular feeling or feelings?"

To guide the interviewee towards becoming conscious of these different dimensions, the interviewer has a set of highly precise non-verbal clues, such as eye movements and co-verbal gestures. James had already observed that thought was accompanied by micro-movements:

"In attending to either an idea or a sensation belonging to a particular sense-sphere, the movement is the adjustment of the sense-organ, felt as it occurs. I cannot think in visual terms, for example, without feeling a fluctuating play of pressures, convergences, divergences and accommodations in my eyeballs... (...) As far as I can detect, these feelings are due to an actual rolling outwards and upwards of the eyeballs." (James 1890, pp. 193-195)

Various papers since then have shown that eye movements precisely indicate the sensorial register used¹⁸. Attentive observation of these movements thus enables the interviewer to identify the sensorial register in which the interviewee is situated at a given moment, without necessarily being aware of this, and to draw his attention to this register. For example, if the interviewee looks upwards, it is probably because he is forming a mental image. An apposite

question, such as "As you talk, you are looking up there (upwards and to the left). What are you doing inside yourself as you look in this direction?" will probably enable him to become aware of this image and describe it. Similarly, when the interviewee is looking forward horizontally, this is often a clue that he is listening to a sound or talking to himself in an inner voice. An appropriate question will enable him to become aware of this.

Throughout the interview, the interviewer's prompts are also based on the observation of the gestures accompanying the words spoken (or substituted for the words spoken) in a non-conscious way. Amongst these co-verbal gestures, a distinction is usually drawn between gestures that set the rhythm of the discourse and stress the vocal intonation, without relating to the content itself, and referential gestures which represent something. Amongst the latter, which are the only ones which need concern us here, a distinction is drawn between *iconic* gestures, *metaphorical* gestures¹⁹ (for example, McNeill 1985 and 1992) and *deictic* gestures. An iconic gesture at least partially reproduces an actual gesture, the shape or movement of an object, or indicates its spatial location: for example, I mime the movement of hitting an obstacle as I relate a car accident. A metaphoric gesture is associated with the description of an abstract idea or an internal process: for example, I perform the same type of gesture as above, but while evoking a difficulty encountered in resolving a problem²⁰. A deictic gesture designates the zone of the body in which a feeling or internal process is felt. Observation of these various types of gesture enable the interviewer to help his interlocutor to become aware of the kinesthetic and felt dimension of his experience and to deepen its description. For example, a deictic gesture towards the chest can draw the interviewee's attention to the felt sensation, with the help of a question such as: "What is happening for you in the middle of your chest?".

Christelle describes to me her sensations in the minutes that preceded an epileptic fit. Repeatedly, she passes her hand over her forehead, which I finally point out to her: she then becomes conscious of a sensation, which until then has been pre-reflective, of a "slight touch, like a breeze, a veil that lightly touches my forehead".

Similarly, interviewing researchers about the process of emergence of their ideas, I have observed a very great number of metaphoric gestures (which are usually pre-reflective): gestures of loops, flows, springing out, opening, tightening, planes moving closer or apart, sometimes miming a consistency or a texture, such as solidity, fluidity or evanescence. These gestures have enabled us repeatedly to help them to become aware of their internal processes, thanks to prompts such as: "What is separated in this way?", "What opens up like that?".

2.6 Deepening the description to the required level of precision

To help the interviewee deepen the description of his experience, the researcher draws on the knowledge he has acquired of the various dimensions of the subjective experience:

- its temporal, dynamic or diachronic dimension, which corresponds to its taking place in time: the experience is a flow, and it can be described in the form of a succession of instants,
- its synchronic and non-temporal dimension: a specific configuration of the interviewee's experiential space is associated with each of these moments, and this cannot be described by relations of succession: sensorial registers used, type of attention mobilised, emotional tones, etc.

2.6.1 Deepening the diachronic dimension

Guided by his meta-knowledge of the diachronic structure of the subjective experience, the interviewer puts questions which guide the interviewee's attention towards the various moments of his experience, which flag them without suggesting any content (Vermersch 2004b). This type of "content-empty" questioning enables the researcher to obtain a precise description without infiltrating his own presuppositions. He thus marks the start: "How did you start? What happened first?", and then marks the next stage: "What did you do then?" and marks the end: "What happened at the end? What did you end with?" These questions enable the gathering of an initial level of description in the form of a succession of stages. The same type of questioning is resumed to deepen the description of a stage: "Can you look at step number 2 again? How did you do this? How did you start?" so as to obtain a description of a succession of operations. And so on, for each operation, until the required level of detail is achieved.

Let us take for example a task consisting of memorising this matrix of figures (an exercise taken from Guillaume 1932):

| | | |
|----|----|---|
| 11 | 7 | 8 |
| 4 | 21 | 6 |
| 9 | 15 | 2 |

Here is the overview of an interview between two students, whose purpose is to describe the mental operations carried out to memorise the matrix down to the finest level of detail possible. The deepening is not performed for all the operations, but by choosing at each stage one or two operations in the sequence gathered (shown in italics):

The questions: "When I give you the matrix to memorise, what do you do? How do you begin? (...) And then afterwards?" enable the gathering of a first level of description, in the form of a four-step sequence:

I read the whole of the matrix / *I memorise the first line* / I memorise the second line / I memorise the last line.

The question: "What do you do to memorise the first line?" enables a greater degree of precision in the second step:

I read the three numbers / *Then I reread them mentally.*

The question: "What do you do to reread them mentally" enables a deepening of the second sub-step:

I make a mental representation of the empty matrix / Then the numbers appear on it one by one.

And so on: "How do you make a representation of the empty matrix?"

I close my eyes / I see it / It is about 50cm in front of me, slightly upwards to the right of my head / It has the same appearance as the matrix on the page, but about twice as large.

"How do the numbers appear to you on it one by one?"

The boxes of the matrix are filled in one by one with the corresponding number / The number that is written in is clear / When I move on to the next box, the number of the previous box remains written but becomes blurred.

"How are the boxes filled in?"

I fill them in / *I say the number to myself very quietly* and at the same time *I put them on the matrix.*

The questions: "How do you say the number to yourself very quietly?" and "What do you do to put the number on the matrix?" enable the achievement of an even greater scale of precision of description.

From the second or third level of description, the pre-reflective dimension of the memorisation process is attained. To deepen the description, the aid of the interviewer becomes essential. His questions help the interviewee to stabilise his attention on this unusual level of detail, to become aware of pre-reflective internal operations, particularly tests, comparisons and diagnoses that are highly implicit. For example the question: "How do you

know you have memorised the first line?" enables the interviewee to become conscious of a particularly implicit test (which could have been further deepened):

I deliberately think of something else (my weekend in Alsace) / I think back to the matrix on which the three numbers appear at the same time distinctly / Then I know that I will remember them, and I move on to the next line.

Here is another sequence of questions that enable the deepening of a highly implicit inner concentration operation:

- I am concentrating
- What do you do to concentrate?
- (...) ²¹ I am listening to what is happening inside me.
- What do you do to listen? If you wanted to teach me how to do it, what would you tell me?
- (...) First, I am going to put my consciousness much further towards the back of the skull.
- What do you do to put your consciousness at the back of the skull? (...)

And when to the questions: "What do you do to ...", "How do you know that ...", the interviewee begins to answer: "I do nothing", or "I don't know", the interviewer, in order to encourage the emergence into consciousness of the pre-reflective dimension, may use "Ericksonian" language²²:

And when you do nothing, what do you do?

And when you don't know, what do you know?

How do you know that you don't know?

2.6.2 Deepening the synchronic dimension

Guided by his meta-knowledge of the synchronic structure of subjective experience, the interviewer will help the interviewee to deepen the description of the characteristics of his experience that are not temporal. Again, his questions relate to the structure of experience, without inducing any content²³. For example, if the interviewee becomes conscious of a mental image, the researcher will bring him to precisely direct his attention to the structural characteristics of this mental image, of which he usually has no reflective consciousness²⁴. A mental image may take two different forms :

- It may appear in front of the subject's eyes: for example on the table, on the wall, in the space in front of the subject, or on an imaginary support like a "screen". In this case, the image appears at a given distance, in a given direction, with a given size. This is the case with the mental representation of a matrix described above, and of the image of the elephant described in the appendix. In this case, the interviewer will draw the

interviewee's attention to the spatial characteristics of the image, thanks to the following questions: "What is the dimension of this image? Where do you see it (up, down, to the right, to the left)? At what distance do you see it? Is it two or three-dimensional?" The interviewer can also draw the interviewee's attention to the kinematic characteristics of the image: "Is it a moving picture? Does the image move in space?"

- In the second type of mental image, there is neither distance nor support, since the subject is "in the picture". In this case, the interviewer may draw the interviewee's attention to his "perceptual position" in the scene: "Are you in your own skin? Are you in the skin of another character? Or are you viewing the scene as an uninvolved observer (and if so, from where exactly)?"²⁵ Here is a description of this type of picture: "I remember this scene very well. It was one evening in April. I'm alone in the kitchen, I'm cooking. The door is open on the garden, I can see again the particular light of this evening of spring. Suddenly, Marie appears on the threshold, in her little blue dress, holding all the garden's tulips in her arms."

In both cases, the following questions will help the interviewee to become conscious of the visual characteristics of the image: "Is it in colour or in black and white? Is it detailed or fuzzy? Is it dark or light?" The interviewer can also ask if the image is stable or fleeting, if it has been constructed or is remembered, and if it is accompanied with (remembered or constructed) sounds, odours or physical sensations.

If it is a matter of describing a sound, the interviewer will draw the interviewee's attention to the generic characteristics of a sound: its volume, its tone, its distance, its direction and its persistence... If the interviewee talks to himself, as is often the case, is it with his own voice, or with another voice? From which direction does this voice come? For example:

- If I have understood correctly, when this image appears, you say to yourself: "I don't want this elephant." Describe this inner voice to me.
- It's my own normal voice.
- It's your own voice. What is its volume?
- It is gentle, light.
- Where do you hear it?
- It comes from the right of my head, a little way back.

A physical sensation may in the same way be very precisely described in terms of intensity, location, or dimension. The focusing questioning mode is very well suited to helping a person to direct his attention to his physical feelings (about a problem, a person, a situation or a

problem), and intensify perception of the feeling and describe it.

All this work of deepening, of the diachronic dimension and the synchronic dimension, is considerably encouraged by the interviewer's frequent reformulations. While helping the interviewee to stabilise his attention on his experience, they enable him to check the accuracy of the description, and correct it if necessary. They also enable him to gradually complete the description, and add more and more precision.

But unlike the Rogersian interview for example, which is limited to reformulations and open questions, the questioning mode used here throughout the interview is both non-inductive but directive. Non-inductive because it is "content-empty", it draws the interviewer's attention to the structural characteristics of his experience without inducing any content. Directive, because it very firmly maintains the interviewee in the framework of the singular experience he is exploring, and direct and guide it resolutely in the exploration of these characteristics, down to the depth required. This firmness is essential to enable the interviewee to carry out the very inhabitual interior gestures which are required for him to achieve this description.

In this effort, it is the meta-knowledge of the researcher which act as a guiding thread to the other person's becoming conscious. This meta-knowledge is of various types:

- 1) Knowledge about the structure of the experience which forms the subject of the current research, which is gradually elaborated during the interviews and their analysis²⁶.
- 2) This knowledge gradually enriches the knowledge of the researcher concerning the structure of subjective experience in general.
- 3) An intimate knowledge of the interior gestures which enable one to relate to one's own experience, gestures which the researcher must be familiar with in order to help the interviewee experience them (Vermersch 1999, p. 40, 2000b p. 11).

This meta-knowledge must remain open and flexible. To take an example of the second type: during my research into intuitive experience, I saw the gradual appearance of the description, at first timid and hesitant, of sensations that were neither interoceptive nor exteroceptive, and with no defined sensorial mode, which did not enter into the descriptive categories of a sensation that I had begun to construct. Their recognition, including in my own experience, gradually enabled me to guide other persons towards becoming conscious of them and describing these sensations, and to create new descriptive categories which are gradually becoming finer. This gradual process of emergence and refinement of meta-knowledge is still relatively little studied and understood.

Note concerning the DES process

The DES process (Descriptive Experience Sampling) used by Hulburt and Heavey (2001, 2004), which consists of using a beeper, at random intervals, to draw the interviewee's attention to what he is living at that precise moment, seems in my view to overcome only partially the six difficulties I have indicated:

- The beep enables the stabilisation of the interviewee's attention for a brief instant on what he is experiencing (difficulty 1)
- As the experience explored is indeed a singular experience, it enables him to become aware of what he has really done at this instant (perhaps different from what he is imagining he is doing (difficulty 2).
- As the experience on which attention is being directed is still fresh, retrospective analysis is facilitated (difficulty 5).
- But I doubt whether the beep enables the interviewee to direct his attention from "what" to "how", unless by chance. It enables him for example to become aware that he is imagining a scene in the future, but not the processes that enable him to construct this image (difficulty 3).
- Furthermore, the beep does not indicate towards which dimensions of his experience to direct his attention (difficulty 4).
- It is even less useful in enabling him to increase the scale of precision of the observation (difficulty 6). As the two researchers themselves admit, "DES is not interested in the obscure or the hard to detect. It is interested only in the obvious, the easily apprehensible" (Hulburt and Heavey 2004, p. 119).). The beeper is not suitable for observing very brief or very fine subjective events.

2.7 Putting into words

To overcome the poverty of our language for describing subjective experience, the role of the interviewer is to encourage the interviewee to find his own words, even if the sensation or inner operation is called "that", "that strange thing", or is described by a strange phrase, rather than using a word that insidiously disguises them with its usual meaning and makes him lose contact with them. If he perseveres, the interviewee then discovers that he can use words differently, to make them say something new²⁷, and that it is possible for him to describe his experience in a fresh way, with an unexpected level of precision. The creation of words that

enable him to precisely describe new facets of his subjective experience has the effect of refining the perceptions of the interviewee: in a subsequent interview for example, drawing in particular on this vocabulary that is shared with the interviewer, he will provide a description that is even more precise. It would seem therefore that we can gradually enrich our language with words and with more precise descriptive categories enabling us to refer to our own experience²⁸.

To the question "does putting the experience into words not introduce an interference with the described experience", I would give the following answer: yes certainly, if the verbalisation and the experience were concomitant. But the attentive observation of the verbalisation process, at any rate as it is carried out in the interviews that I conducted or observed, reveals that they are not. The interview would seem in fact to be an alternation of instants in which the interviewee enacts or re-enacts his experience in silence, and of times in which he describes the trace, the internal imprint left in him by this experience.

"When I start talking about it, I no longer have the feeling. I talk about the memory of the feeling that I have, but I do not talk while I feel it at the same time. It is as though the feeling had left an imprint, a strong one, strong enough for me to talk about it to you, as though it were a trace."

It seems therefore that verbalisation, as it is carried out *a posteriori*, does not introduce any interference in the course of the experience itself.

2.8 Relationship to the interviewer

For the interview situation to play its container role efficaciously, it is crucial for there to be a relationship of trust between the two persons involved. There are two essential reasons for this. First because this interview technique is not non-directive, but is very definitely a directive one. The interviewer must demonstrate a great deal of firmness (and delicacy), interrupting the interviewee if there is an evasion attempt, so as to keep him inside his experience by means of reformulations and directive questions. For the interviewee not to take umbrage at this firmness, he must have well understood the objective of the interview, and have a great deal of trust in the interviewer. Furthermore, the purpose of the interview is to enable the interviewee to access a dimension of himself, an intimate dimension, which he does not yet know. For this to be achieved, the interviewee must abandon his representations and his beliefs about himself, and abandon for the duration of the interview his usual shell, agree to relax and enter a state of vulnerability. For him to allow himself to be guided in this dimension and carry out this intimate effort in the presence of the interviewer, he must feel

the interviewer totally present, attentive and open-minded. The sense of security thus generated allows him the slowness, the time of silence, the latency, the absence of an immediate answer, which enable the emergence to his consciousness of the pre-reflective dimension of his experience.

While being very determined in the way he guides the interview, the researcher must remain open-minded and humble. While the interviewee does not know what he knows, the interviewer does not know what he is looking for. The meta-knowledge he has acquired merely gives him some directions in which to guide the other person's attention. The cornerstone of the interview is the relationship of trust which is built up, this is what enables the interviewee and the interviewer to abandon their preconceptions and expectations to make way for something new, which is not yet known, and allow it the time to emerge. It is this relationship of trust which enables the miracle of becoming aware.

3. Validation questions

Are these interview techniques rigorous techniques by means of which reliable results can be obtained? What are the criteria at our disposition to make sure that a description is valid? How can we ensure that the description gathered in fact corresponds to the experience actually lived, and not to an imaginary experience, or an experience reconstructed through theoretical knowledge about this experience?

- The first criterion is methodological, and consists of complying with the rules for conducting an interview. The interviewer has at his disposal some rigorously defined techniques for introducing the interviewee:
 - stabilising his attention on the experience described,
 - converting his attention from the "what" that usually absorbs his interest to "how",
 - moving from representations and general beliefs about the experience in question to the description of a singular experience,
 - directing his attention towards the different dimensions of his experience,
 - moving deeper in the scale of precision of his description.

The recording or transcription of the interview makes it possible to check that the questions and prompts have been formulated in compliance with these techniques, in a way that is both precise and non-inductive.

The use of all these processes has as a prerequisite the interviewer's ability to remain focused and maintain very acute attention to the interview situation, from the start to the end

of the process. All these processes are far from being "natural"; methodically conducting an interview of this type is not a trivial activity, but a veritable expert skill, which is learnt through a specific learning process and training.

- The second criterion is intersubjective: this is the reproducible character of the experience, the kingpin of all validation, including in the classical sciences.

If the experience described is accessible to him²⁹, the researcher can check through his own experience the accuracy of a description produced by another person. It is also possible to check the convergence of the descriptions produced by various subjects. If the experience described is little known, and there is no vocabulary or pre-established descriptive categories with which to refer to it, and if furthermore the descriptions are gathered by various researchers working independently, the convergence of the descriptions constitutes a very convincing criterion for their authenticity³⁰.

- The fact that a person can improve a cognitive process by "appropriating" all or part of someone else's strategy, constitutes a highly convincing pragmatic validity criterion. For example, the fact that an epileptic patient, by carrying out a sequence of internal micro-operations that have been described by another person, also succeeds in interrupting an incipient crisis, reveals the functional character of the description produced.
- In the case of neurophenomenological research projects, a very convincing heuristic criterion sometimes confirms the validity of a description: the fact that a phenomenological category enables the discovery of a structure in neuroelectric data that would otherwise appear to be chaotic.

For example, first person descriptions of three distinct attentional states before the realization of a given cognitive task (a 3-D visualization task), enabled experimenters to detect three characteristic patterns of phase synchrony between EEG signals during the task (Lutz 2002). In other words, it is the use of a phenomenological category as a criterion for neuronal analysis which enabled experimenters to detect an original neuronal structure: this confirms in turn the relevance of this category.

- But the main criterion for the validity of descriptions seems to be the "speech position" of the subject who is describing his experience. As we saw earlier, the interview consists of an alternation of moments in which the interviewee relives and silently resumes contact with his experience, and times in which he describes the trace, or the interior imprint left in himself by the experience. For the description produced to be accurate, it is therefore essential that the subject, at the moment he is expressing himself, should be in contact and have a hold on his

experience. Each time this imprint begins to be erased, he must revive it, and refresh it, if he is not to merely pronounce empty words. As an interviewee remarked:

"If I have really been reimpregnated with the experience, I am going to be able to talk right up to the moment when, "wham!", we will only be in words, so it will not mean anything, so I am going to go back into the experience for refreshing it."

In this perspective, the observation of many persons in the process of describing their subjective experience has led to the following hypotheses:

1) There are two types of utterance, which by analogy with the "perception positions" Vermersch (1994/2003) terms "speech positions", which are very different depending on whether the person talking is or is not in contact with his experience (probably with a whole range of intermediate positions):

- an "embodied"³¹ utterance position when the person is in contact with his experience,
- a disembodied utterance position when, losing contact, he expresses himself on the basis of a vague memory of an experience, or the memory of an account of an experience, or his representations, beliefs or judgements about his experience.

2) There is a set of subjective and objective indicators (both for the person speaking and for the person listening) which enable the identification of these two utterance positions.

What are the indicators which enable the identification of an embodied utterance position? The objective indicators are the best known: they are verbal, non-verbal and para-verbal. The verbal indicators are the use of "I", the present tense, the specific context indicators (place and time), the concrete and detailed character (as opposed to conceptual and general) of the vocabulary used: all these signs indicate that the subject is making efforts to describe a particular situation, and that he is not in the process of reciting theoretical knowledge. An example of a non-verbal indicator is the direction of the eyes: when the subject is reliving the past experience, he takes his eyes off the interviewer to look "into space", to the horizon. Concomitantly, the flow of speech slows, and the words are often cut with silences: these para-verbal clues are the sign that the subject is plunging into himself to make contact with the pre-reflective dimension of his experience. At the same time, metaphoric or deictic co-verbal gestures appear. These usually unconscious gestures, which occur even with blind people, and even when the interviewer cannot see them, do not seem to be intended to transmit information to the interviewer, but to be carried out because the subject is in contact - or in order for the subject to make contact - with his experience.

All these clues make very clearly perceptible the moment at which the subject, abandoning his representations, beliefs and judgments, comes into contact with his own experience and begins to describe it, slowly, and with an often unexpected degree of detail. Even an untrained listener or reader cannot fail to be struck by this sudden change.

3) The internal criteria of an embodied speech position, enabling the subject to distinguish those moments at which he is genuinely in intimate contact with his experience, from those in which he gradually slides towards a generalisation, or knowledge about his experience, have not yet been sufficiently described. I hypothesise that the subject is then in contact with a very profound dimension of his experience, which is prediscursive, preconceptual, profoundly gestural, and prior to the separation into the five sensorial modes, in which the interior/exterior and I/others frontier is still permeable (Petitmengin 2005b).

What we are witnessing here is the emergence of a new conception of the validity of a description: this validity is no longer measured in terms of "truth", of representative exactitude, or of adequacy in relation to pre-existing experience, but in terms of the conditions of its genesis, the quality of contact with the experience in which it takes its origin, and the depth of its place of emission.

This set of criteria can be used to ensure that the descriptions gathered are not inevitably deformed by the interpretations of the subject producing them and the interviewer gathering them. But as we have just seen, we do not have the epistemological naivety to believe that a description, even if produced with discipline, can be "true" in the sense that it would exactly reflect the initially lived experience. Each moment of explicitation introduces a transformation: the relived experience, the reflected experience, the experience put into words are new experiences. Rather than trying to avoid this obvious fact at all costs, or adopting the opposite extreme position, consisting of rejecting all descriptions in the first or second person, we consider it essential to observe and precisely describe these transformations. Our current research therefore consists of studying in a "surreflective" way (Merleau-Ponty 1964, p. 61), with the same explicitation tools, the various moments and different dimensions of the act of becoming aware³²: the inner operations or "gestures" that enable me to enter into contact with my own experience, or cut myself off from it, that enable me to evoke a past experience, that enable me to divert my attention from "what" to "how", that enable me to direct my attention to the various dimensions of my experience, that enable me to alternate putting into words

and "refreshment" of the past experience... and also, at a higher level of abstraction, how the researcher's meta-knowledge is gradually constructed ... We believe that a rigorous description of these operations will enable progress towards a new definition of the "truth" of a description, and refine its criteria of validity.

4. The post-description stage

4.1 Formalisation

Once the description has been gathered and transcribed, a considerable amount of work - reorganisation, analysis, and then abstraction and formalisation - is necessary to delineate and represent the structure of the experience described. The approach³³ I propose includes four main stages as follows:

- 1) Resequencing the description. The chronology of the process of awareness and the chronology of the experience are not identical. When the subject relives the experience for the first time, he provides a quite coarse "large mesh" description. He needs to go over it several times to successively become conscious of all the dimensions of his experience, and to provide a fine mesh description. Furthermore, as seen earlier, the process of awareness can take place in the opposite to chronological order of the experience.
- 2) Delineating and representing the diachronic structure of the experience: identifying its hingeing points, so as to point up its main phases and subphases, down to the desired level of detail.
- 3) For each phase, identifying the experiential components that cannot be represented in the form of a succession (such as the required inner state, the type of attention and the sensorial registers mobilised, etc.), and construct a synchronic representation of it.
- 4) If the objective is to compare several descriptions, constructing from structured representations of each experience, a generic representation which points up their common structure, and possible variants, both from the diachronic and synchronic viewpoint.

Amongst the difficulties encountered during this formalisation work, we find, at a higher level of abstraction, the vocabulary difficulty already mentioned for the description itself: the poverty of the concepts and the vocabulary available often force the model maker, when a new experiential category emerges, to invent a name for it. The birth of this language, the witness to the emergence of meta-cognition concerning subjective experience, is however an essential stage for the constitution of a knowledge community around this new field.

4.2 Functions of descriptions of subjective experience

What use is the structured representation of a description or a set of descriptions? My work has enabled me to identify three main functions.

4.2.1 Cognitive function

The first is a cognitive function: for the cognitive science researcher, the structured description of a cognitive process enables a better understanding of its unfolding and its main dimensions. If a generic representation of it has been constructed, it enables the identification of the regularities and variants in the realisation of this process. It is this type of work that I have carried out for the subjective experience associated with the appearance of an intuition, and for preictal experience.

4.2.2 Heuristic function

For the neuroscience researcher, this cognitive function is combined with a heuristic function: it is the discovery of variants in the realisation of the same cognitive process that can guide the neuronal analysis. Whether the structuring phenomenological variable is identified a posteriori, by comparison of the descriptions gathered after the experiments (Lutz 2002), or a priori and front-loaded into the experimental design, by supplying instructions to the subject about the way the task should be carried out, as proposed by Gallagher (2003b), it is the discovery of a structure in subjective experience that enables the detection of a structure in the neuronal activity. Another example is taken from our research into subjective preictal experience: I have gathered the description of countermeasures adopted by patients to try to stop an incipient crisis (Petitmengin 2005a). What is the neuroelectrical correlate of these countermeasures? Here too it is the phenomenological analysis that guides the neuronal analysis.

4.2.4 Pedagogical and therapeutic function

The third function of descriptions of subjective experience is pedagogical and therapeutic: if a person becomes conscious of his subjective experience and describes it, this enables a better understanding of how he operates, and can under certain conditions enable him to transform the way he operates.

For example, the awareness - by the students I am training in explicitation techniques - of their pre-reflective processes enables them to put their own experience into perspective, and thus be less imprisoned by it. This becoming conscious introduces into their everyday

life a playfulness, a breath of air, a space... that makes them freer... and more curious and more attentive to everything that they encounter in their first steps in professional life; it gives them a greater capacity for astonishment. This space gives them greater lucidity in relation to the particularities of the practices, methods, modes of communication and interpersonal relations of the professional circles they are discovering. It also gives them an earlier and more precise consciousness of the difficulties they are encountering, and a more explicit consciousness of the strategies they implement to resolve them.

Taking consciousness of a cognitive process also means opening up the possibility of transforming it. I am not condemned to have a "poor memory", for once I have become conscious of this, I can transform the very precise sequence of inner micro-operations that I carry out to memorise or to remember. I am not angry by nature, but I can change the sequence of inner operations that lead me to often lose my temper. How can such a transformation be carried out? What are the conditions governing its possibility? An immense field of research, which has been very little explored up to now, is being opened up.

In the medical field, the possibility for the patient to become aware of his internal processes also opens up new perspectives. For example, the fact that appropriate training can enable epileptic patients to become aware of the subtle symptoms that announce the arrival of a seizure, and set up countermeasures to interrupt these symptoms (Petitmengin 2005a), opens up a new and unexpected line of research pointing towards a *non-pharmacological* and cognitive therapy for epilepsy, and perhaps another understanding of this illness. Looking beyond epilepsy, the taking into account of the subjective experience of patients, the possibility of studying it and describing it, could open up a vast field of research in the medical field, and considerably transform our vision of many illnesses.

The awareness of our subjective experience opens up highly promising paths for transforming this experience, in the pedagogical field, in the medical field, but also potentially in all fields of human experience.

Conclusion

We are on the threshold of a vast area of research, which has been very little explored in our culture, that of subjective experience. We have a great deal of work to do: we need to improve our methods in order to study it, and create a language to talk about it, in order to federate the community of researchers and human beings from a wide range of backgrounds that is currently being constituted around this new field. This exploration could considerably

transform not only our vision of the world, but also the life we live in the world.

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Bibliographical references

- Andreas C. & Andreas T. (1991), "Aligning Perceptual Positions: a new distinction in NLP", *Anchor Point* 5:2, pp. 1-6
- Bandler R. et Grinder J. (1975), *Patterns of the Hypnotic Techniques of Milton H. Erickson*, (Capitola, CA: Meta Publications)
- Bowers K.S. (1984), "On Being Unconsciously Influenced and Informed", in Bowers S. et Meichenbaum D. E., *The Unconscious Reconsidered* (New-York: John Wiley & Sons), pp. 227-272
- Buckner W., Reese E., Reese R., "Eye movement as an indicator of sensory components in thought", *Journal of Counseling Psychology*, 34 (3), pp. 283-287
- Calbris G. (2003), "From cutting an object to a clear cut analysis", *Gesture* 3:1, pp.19-46
- Cohen G. (1996/1989), *Memory in the real world*, Psychology Press
- Depraz N, Varela F., Vermersch P. (2003), *On Becoming Aware* (Amsterdam: John Benjamin Press)
- Dilts R. (1983), *Roots of NLP* (Capitola, CA: Meta Publications)
- Dilts R. (1998), *Modeling with NLP* (Capitola, CA: Meta Publications)
- Dilts R., Grinder J., Bandler R., Delozier J. (1980), *Neuro-Linguistic Programming : The Study of the Structure of Subjective Experience*, vol. 1 (Capitola, CA:Meta Publications)
- Dreyfus H. L. (1986), *Mind over Machine. The power of human intuition and expertise in the era of computer* (New York: MacMillan)
- Ellickson J.L. (1983), "Representational systems and eye movements in an interview", *Journal of Counseling Psychology* 30(3), pp. 339-345
- Ericsson, K.A. & Simon H.A. (1984/1993), *Protocol Analysis. Verbal Protocols as Data* (Cambridge: MIT Press)
- Ericsson, K. A. (2003), "Valid and Non-Reactive Verbalization of Thoughts During Performance of Tasks", *Journal of Consciousness Studies*, 10, N° 9-10, pp. 1-18
- Galín D. & Ornstein R. (1974), "Individual differences in cognitive style and reflective eye movements", *Neuropsychologia* 12, pp. 376-397
- Gallagher S. (2003a), "Complexities in the first-person perspective: comments on Zahavi's *Self-Awareness and Alterity*", *Research in Phenomenology*, 32, pp. 238-48
- Gallagher S. (2003b), "Phenomenology and Experiential Design", *Journal of Consciousness Studies*, 10, N° 9-10, pp. 85-99

- Gendlin E. (1962/1997), *Experiencing and the Creation of Meaning*, Northwestern University Press
- Gendlin E. (1996), *Focusing Oriented Psychotherapy*, (New-York: The Guilford Press)
- Gendlin E., "Introduction to thinking at the edge", <http://www.focusing.org>
- Grinder J., Delozier J., Bandler R. (1977), *Patterns of the Hypnotic Techniques of Milton Erickson*, vol. 2, (Capitola, CA: Meta Publications)
- Guillaume P. (1932), *Manuel de psychologie*, (Paris: Presses Universitaires de France)
- Gusdorf G. (1950/1993), *Mémoire et personne*, (Paris: Presses Universitaires de France)
- Hulburt R.T. , Heavey C.L. (2001), "Teeling what we know: describing inner experience", *Trends in Cognitive Sciences*, Vol. 5, N° 9, pp. 400-403
- Hulburt R.T. , Heavey C.L. (2004), "To Beep or Not To Beep. Obtaining Accurate Reports About Awareness", *Journal of Consciousness Studies*, 11, N° 7-8, pp. 113-128
- Husserl E. (1913/1950), *Idées directrices pour une phénoménologie*, (Paris: Gallimard) (*Ideen zu einer reinen Phaenomenologie und phaenomenologischen Philosophie*)
- Husserl E. (1925/1962), "Phänomenologische Psychologie", *Husserliana*, vol IX (La Haye: Martinus Nijhoff)
- Jack A., Roepstorff A. (Eds) (2003), *Trusting the subject ? Part 1*, *Journal of Consciousness Studies*, 10, N° 9-10
- Jack A., Roepstorff A. (Eds) (2004), *Trusting the subject ? Part 2*, *Journal of Consciousness Studies*, 11, N° 7-8
- James W. (1890), *Principles of Psychology* (New York: Henry Holt)
- Kinsbourne M. (1972), *Eye and head turning indicates cerebral lateralization*, *Science* 179, pp. 539-541
- Le Van Quyen M., Martinerie J., Navarro V., Boon P., D'Havé M., Adam C., Renault B., Varela F. and Baulac M. (2001a), "Anticipation of epileptic seizures from standard EEG recordings", *The Lancet*, 357: 183-188
- Le Van Quyen M., Martinerie J., Navarro V., Baulac M. and Varela F. (2001b), "Characterizing the neuro-dynamical changes prior to seizures", *Journal of Clinical Neurophysiology*, 18:191-208
- Le Van Quyen M. and Petitmengin C. (2002), "Neuronal dynamics and conscious experience: an example of reciprocal causation before epileptic seizures", *Phenomenology and the Cognitive Sciences*, 1:169-180
- Loiselle F. (1985), *The effect of eye placement on orthographic memorization*, PH.D. Thesis,

Faculté des Sciences Sociales, Université de Moncton, New Brunswick, Canada

- Lutz A. (2002), "Toward a Neurophenomenology of generative passages: a first empirical case study", *Phenomenology and the Cognitive Sciences*, 1:133-167
- Lyons W. (1986), *The disappearance of introspection* (London: Bradford Book)
- Marcel A.J. (2003), "Introspective Report. Trust, Self-Knowledge and Science", *Journal of Consciousness Studies*, 10, N° 9-10, pp. 167-186
- Martinerie J., Adam C., Le Van Quyen M., Baulac M., Clémenceau S., Renault B. and Varela F. (1998), "Epileptic seizures can be anticipated by non-linear analysis", *Nature Medicine*, 4: 1173-1176
- Merleau-Ponty M. (1953), *Éloge de la philosophie* (Paris: Gallimard)
- Merleau-Ponty M. (1964/1996), *Le visible et l'invisible* (Paris: Gallimard)
- McNeill D. (1985), "So you think gestures are non verbal ?", *Psychological Review*, Vol. 92, N° 3, pp. 350-371
- McNeill D. (1992), *Hand and Mind: What gesture reveals about thought* (Chicago: University of Chicago Press)
- Neisser U. (1982/1999), *Memory observed, Second Edition. Remembering in Natural Contexts* (Worth Publishers)
- Mill J. S. (1882/1961), *Auguste Comte and Positivism* (Ann Arbor: University of Michigan)
- Nisbett R.E. & Wilson T.D. (1977), "Telling more than we know: Verbal reports on mental processes", *Psychological Review*, 84, pp. 231-259
- Perruchet, P., Vinter, A. (2002), "The Self-Organising Consciousness: A Framework for Implicit Learning", in R. French & A. Cleeremans (Eds.), *Implicit Learning and Consciousness: An Empirical, Computational and Philosophical Consensus in the Making*, (Psychology Press), pp. 41-67
- Petitmengin-Peugeot C. (1999), "The Intuitive Experience", in F. Varela and J. Shear (Eds), *The View from Within*, pp. 43-77
- Petitmengin C. (2001), *L'expérience intuitive*, Préface de Francisco Varela, (Paris: L'Harmattan)
- Petitmengin C. (2005a), "Un exemple de recherche neuro-phénoménologique, l'anticipation des crises d'épilepsie", *Intellectica* 2005/2: 40
- Petitmengin C. (2005b), *Towards the source of thoughts*, submitted for publication
- Poincaré H. (1947), "L'invention mathématique", in *Science et Méthode* (Paris: Flammarion), pp. 43-63
- Proust M. (1929/1987), *A la recherche du temps perdu* (Paris: Laffont)

- Piaget J. (1974a), *La prise de conscience* (Paris: Presses Universitaires de France)
- Piaget J. (1974b), *Réussir et comprendre* (Paris: Presses Universitaires de France)
- Platon (1981), *Le Sophiste*, Œuvres complètes, tome 2 (Paris: Gallimard)
- Platon (1981), *Ménon*, Œuvres complètes, tome 1 (Paris: Gallimard)
- Polanyi M. (1962), *Personal Knowledge. Towards a Post-Critical Philosophy*, The University of Chicago Press
- Polanyi M. (1966), *The Tacit Dimension*, Library of Congress
- Reber A. S. (1993), *Implicit Learning and Tacit Knowledge, An Essay on the Cognitive Unconscious*, Oxford University Press
- Ribot (1881), *Les maladies de la mémoire* (Paris: Alcan)
- Ricœur P. (1950), *Philosophie de la volonté* (Paris: Aubier)
- Sartre J.P. (1936), *L'imagination* (Paris: PUF)
- Sartre J.P. (1938), *Esquisse d'une théorie des émotions* (Paris: Hermann)
- Schön D. A. (1983), *The Reflective Practitioner. How professionals think in action* (Cambridge: Basic Books)
- Schooler J.W. (2002), "Re-representing consciousness: dissociations between experience and meta-consciousness", *Trends in Cognitive Science*, Vol. 6, N° 8, pp. 339-344
- Schooler J.W., Schreiber C.A., (2004), "Experience, Meta-consciousness, and the Paradox of Introspection", *Journal of Consciousness Studies*, 11, N° 7-8, pp. 17-39
- Schwitzgebel E. (2004), "Introspective Training Apprehensively Defended. Reflections on Titchener's Lab Manual", *Journal of Consciousness Studies*, 11, N° 7-8, pp. 58-76
- Stern D. (1985), *The Interpersonal World of the Infant* (New-York: Basic Books)
- Stern D. (1995), *The motherhood constellation* (New-York: Basic Books)
- Titchener E.B. (1899), *A Primer of Psychology*, Rev. Ed. (New-York: Macmillan)
- Titchener E.B. (1901-1905), *Experimental Psychology: A Manual of Laboratory Practice* (New-York: Macmillan)
- Varela F.J., Thompson E., Rosch E. (1991), *The Embodied Mind: Cognitive Science and Human Experience* (Cambridge, MA: MIT Press)
- Varela F.J., Shear J. (Eds) (1999a), *The View from Within. First-person approaches to the study of consciousness* (London: Imprint Academic)
- Varela F.J., Shear J. (1999b), "First-person Methodologies: What, Why, How?", in F. Varela and J. Shear (Eds), *The View from Within*, pp. 1-14
- Vermersch P. (1994/2003), *L'entretien d'explicitation* (Paris: Éditions ESF)

- Vermersch P. (1996), "Pour une psychophénoménologie", *Expliciter* n° 13
- Vermersch P. (1997a), "Approche du singulier", *Expliciter* n° 18
- Vermersch P. (1997b), "La référence à l'expérience subjective", *Revue phénoménologique Alter*, n°5
- Vermersch P. (1999), Introspection as practice, in F. Varela and J. Shear (Eds), *The View from Within*, pp. 17-42
- Vermersch P. (2000a), "Conscience directe et conscience réfléchie", *Intellectica* 2000/2: 31, pp. 269-311
- Vermersch P. (2000b), "Questions sur le point de vue en première personne", *Expliciter* n° 35
- Vermersch P. (2004a), "L'attention entre phénoménologie et sciences expérimentales, éléments de rapprochement", *Intellectica* 2004/1: 38, pp. 325-362
- Vermersch P. (2004b), "Prendre en compte la phénoménalité : propositions pour une psychophénoménologie", *Expliciter* n° 57
- Wallace A. (1999), "The Buddhist Tradition of Shamatha: Methods for Refining and Examining Consciousness", in F. Varela and J. Shear (Eds.), *The View from Within*, pp. 175-187
- Wallace A. (2003), *Buddhist With an Attitude: The Tibetan Seven-Point Mind-Training* (Snow Lion Publications)
- Wittgenstein L. (1992), *Investigations philosophiques* (Paris: Gallimard)

Appendix 1: Example of an interview

J. So Chantal, I spoke to you earlier about an object, in fact I lied to you slightly. It's not an object that I'm going to ask you to think of. I'm going to ask you, right now, to think of an elephant.

C. *Silence (5 seconds), then nods her head, smiling.*

J. OK. So what we're going to do now is... how can I say this to you? It's as though we had a video recorder: we're going to go backwards, and then we're going to replay the sequence, and then we'll see what you did to think of this elephant. OK? So it's very easy, as you've just done it, so we're just going to rewind, and to do that I'm going to ask you to immerse yourself again in this experience. Remember, I started out by saying that I had lied to you: I would like you to hear again my voice telling you: "I lied to you. It's not an object that I'm going to ask you to think of. I'm going to ask you to think of an elephant." So you did something, something happened. At the moment I said to you: "Think of an elephant", what did you do, what happened?

C. The first thing that happened is blackness, that is the screen was not lit. Or rather it had reset itself, it had been erased, as in fact I was not prepared for evoking an elephant.

J. I'm often going to repeat what you say to me, which will enable me first to make sure that I have understood you correctly, and then as the information comes, it will help me to memorise. Don't hesitate to tell me if I am wrong, for that can happen, if what I repeat does not exactly correspond to what you did, to what you experienced, OK? In fact, according to what I understand that you experienced, there was me saying: "Think of an elephant", and what you tell me is that first there was blackness, or more precisely there was the screen, and then the screen reset itself, because you were not ready to evoke an elephant. Can you describe this screen to me? Let's go back in time. You were saying to me: "There is this screen, there is blackness." How does it reset itself, this screen?

C. (...) I think... gradually.

J. Gradually...

C. The images fade away to leave something new behind.

J. Gradually, the images fade away to leave something new behind. What you are going to do now, Chantal, is that you are going to return into this experience. Hear my voice again. I said to you, remember, I said to you: "Chantal, I lied to you earlier. It's not an object that I'm going to ask you to think of. I'm going to ask you to think of an elephant". And then there is

this screen, and you tell me there are images on the screen. What kind of images are there on the screen?

C. (...) When you told me it was not objects, that is some objects of which I had vaguely thought, well they had to be erased.

J. They had to be erased.

C. That's why I pulled across a screen³⁴.

J. You pulled across a screen so as to be able to erase them?

C. (...) To push them away. They were quite blurred but they moved away gradually as the screen opened.

J. All right. A screen that came and put itself in front?

C. In front. Very... very clearly. From the left to the right.

J. Very clearly, from the left to the right.

C. In front of me, I could see it from left to right.

J. You saw it coming from left to right, and it came right in front of you.

C. That's right.

J. What size was it, the screen?

C. ...

J. Find it again, start again. Now you can do that very well. Go back in time, find my voice again: "You know, Chantal, I lied to you. It's not an object that I'm going to ask you to think of. I'm going to ask you to think of an elephant." And then there are a few residual objects, and this screen. What size is it, the screen?

C. (...) It's not very big, but even so it fills all the space that I can see.

J. It's not very big, but even so it fills all the space that you can see.

C. It's about one metre by forty centimetres, wider than it is high.

J. All right. This screen that arrives from the left to the right, about one metre by forty centimetres, wider than it is high, what colour is it?

C. Ah, it's black.

J. It's black, that's what you said at the start: there's blackness, or rather there is the screen. All right, we have a few more details about this very short moment. I'm going to ask you for a final check about that. We haven't finished the interview yet, as for the time being we are preparing for the coming of the elephant. We know there are these objects, there is the screen that arrives from the left to the right, one metre by forty centimetres, which is black. Check if there isn't something else in your experience: are there any feelings? Are there any sounds?

Check. Go back in time.

C. (...) Yes, there are some noises of objects moving away, of the screen opening. A little noise, a little noise that... that tells me something is happening.

J. A little noise that tells you something is happening, that gives you information about...

C. That gives me information... yes, about the opening of the screen.

J. That's it, the screen is there... what happens just afterwards? It's very important to start from scratch, because gradually, perhaps you will become aware of other elements, or not, or that it was not exactly like that. Because we are going deeper and deeper into this experience of thinking of an elephant. Let's go back to the beginning again. Become conscious of what happened for you immediately after the opening of this screen.

C. (...) In fact, I think the screen didn't take up all the space. In fact I think there was already some movement, some movement at the bottom... of the screen. That is objects that were vaguely candidates moved away, the screen opened, and things were happening a little in front of the screen.

J. Things were happening in front of the screen...

C. Indistinct things, but that moved a very little.

J. All right. There was a movement...

C. That's right, a movement. Yes, so it wasn't a vacuum. It was something that... a sign of ...

J. A sign of what?

C. ... not necessarily life, but... animation.

J. And if you like... because all that is very short, it happened very quickly, almost like that (*snaps fingers*). To situate this in the unfolding, you are going to tell me at what moment the objects moved away, the screen arrived... how was all that organised? To tell me that, you have the words that I pronounced, when did it start? When I said to you: "You know, Chantal, I lied to you. I'm not going to ask you to think of an object. I'm going to ask you to think of an elephant". There, you have the words. How did it unfold? Run through it again.

C. (...) So, "I lied to you": it becomes grey-brown, the objects weren't very distinct but there was a form even so, and... afterwards there is a time of... of suspense, because... because in fact I had the idea that you were going to ask me to think of a person.

J. You had the idea, that's interesting, between the moment when I said to you: "I lied to you, Chantal, I'm not going to ask you to think of an object", and the moment the black screen appears from left to right, you have the idea that I'm going to ask you to think of a person. Is that right?

C. That's right.

J. It's another sequence to be inserted. We're not going to explore it, this sequence. What I suggest to you is that, because the elephant was nice, and I could see you were smiling broadly thinking about this elephant, we'll continue to go towards this elephant. Let this sequence unfold: "I lied to you, Chantal. I'm not going to ask you to think of an object, I'm going to ask you to think of an elephant". The objects are moving away, the black screen is arriving from the left to the right, and then what happened afterwards?

C. (...) Well then, from the bottom of the screen...

J. From the bottom of the screen?

C. From in front of the screen. That is when you said: "elephant", then my screen was drawn over. That is... it was drawn over quickly, yes. Then I could do something. So to fill the screen, from the front, there is something that appeared, and which I did not like, because I said to myself that an elephant was something else, and so I made another elephant loom up.

J. All right, all right. When I say: "elephant", your screen is already drawn across, there is this movement that is there, this slightly indistinct movement you were talking of earlier, which is there at the front of the screen. When I say "elephant", does what looms up first come out of that zone, that rather indistinct zone, or from another zone in the screen? Run through it again, the best thing is to run through it again. "I lied to you Chantal, I'm not going to ask you to think of an object. I'm going to ask you to think of an elephant."

C. (...) Oh no, it looms up from somewhere else. That is I first said: "Elephant, Asia"...

J. You said: "Elephant, Asia". You pronounced those words internally, you spoke to yourself.

C. Then, there was a maharajah who appeared from the front of the screen, on his elephant... So there he was on the screen (...) And then I wanted to transform.

J. That's what you said earlier: you said: "That's not an elephant", and you made something else loom up.

C. No, I didn't say that to myself. I said: "I don't want that elephant".

J. Exactly, you said: "I don't want that elephant."

C. Because... there's another one waiting.

J. How did you know there was another one waiting?

C. (...) Because it was on the left, on the left of the screen... there was something... that was waiting.

J. There was something that was waiting on the left of the screen.

C. And then I remembered... where it was, that elephant. I said to myself it was that one that I

wanted... to see.

J. I'll run through the whole sequence again, to see if I've taken all that in. And at the same time that enables you to check as we run through all that, to check if we are accurate in this description. It started like this: I said "You know, Chantal, I lied to you. I'm not going to ask you to think of an object. I'm going to ask you, right now, to think of an elephant". Here your screen is already in place. You say to yourself: "Elephant, Asia". And there's a maharajah on his elephant who arrives. And at the same time you know that on the left there is something waiting. You say to yourself: "I don't want that elephant." Then you remember there is an elephant, from where it is, and it arrives...

C. And it gradually appears. It is gradually revealed on the screen.

J. Starting from the left? How does it happen?

C. No, it was waiting on the left, but it... because... it's an image of an elephant I saw a short time ago... unusual. So I had to concentrate a little bit to remember the details.

J. To remember the details, you had to concentrate. It was something... it was an image that was waiting on the left, what was it?

C. No, it wasn't an image that was waiting on the left. It was something. It was a *presence*.

J. It was a presence. And it is this presence that makes you recall this elephant, at any rate that indicates it was there, and then you concentrate to remember the details.

C. That's right.

J. And afterwards, it appears gradually, little by little. Like a fade-in, how did it appear?

C. Afterwards it's me who places a little... the details.

J. It's you who places the details.

C. Yes.

J. How do you go about placing the details?

C. First I place the surround, because it's an image that is taken from a documentary, during the Vietnam War, where you see an elephant push... help to push trucks to get them out of the mire. So I had to see the décor, the trees, the mud, the trucks... and so this elephant. (...) Yes, the elephant was the last to appear.

J. The elephant was the last to appear. So there, you had indeed followed the instruction of thinking of an elephant. It's at that moment that you knew that the instruction had been followed. At what moment did you know: "OK, I'm thinking of an elephant"? At what moment?

C. Yes, when I saw... when I saw it move.

J. When you saw it move, when you saw the elephant move in the décor you had reconstituted, then you knew that the instruction had been followed. If you like, we'll just run through a little passage again, I still have one or two questions to ask you. I think it's interesting to see how you say to yourself everything that you do, that is: "Elephant, Asia", "I don't want that elephant". So we'll run through the sequence again, I'll ask you about the auditive aspects of your experience. I say to you: "I lied to you Chantal, I'm not going to ask you to think of an object. I'm going to ask you to think of an elephant". Then the screen is already there. You say to yourself: "Elephant, Asia". Just afterwards, the maharajah appears.

C. Yes, I hear lots of things, of course. I hear lots of things because... Asia, maharajah... that means... I hear... The images I see are those where there are these rather hackneyed images of maharajahs, so I hear the sound of these films, that's what I hear.

J. All right, auditive, there are several things. Could we say in a way that there is your inner voice that says: "Elephant, Asia", and the image that appears with the sound of the image.

C. That's right.

J. "Elephant, Asia", it's your inner voice that says that. Where does it come from, if you had to define the location of this voice, where would you put it? Run it through again, let it come back, the voice. When you say to yourself: "Elephant, Asia", just before the image appears.

C. (...) It is in front of me, it is a little bit behind the screen.

J. A little bit behind the screen?

C. Yes, above.

J. How would you describe the volume of the voice: strong, weak?

C. Weak... weak normal.

J. Weak normal. And the tone, the intonations? It's fast, it's slow?

C. It's slow, it's light, it's smiling.

J. Slow, light, smiling. Continue. Afterwards there is an image that appeared, with the sound of those old films accompanying the image. And immediately afterwards you say to yourself: "I don't want that elephant".

C. So then, the voice is not the same, no, it did not come from the same place.

J. So where did it come from?

C. There, it came from somewhere on the left.

J. It came from somewhere on the left. And how would you describe it, in terms of volume, intonations...

C. Well, it was... (...) it was another voice.

J. What do you mean by: "It was another voice"? I'm going to ask you a rather funny question, but if I wanted to have the same voice, how would I go about it? I know it comes from the left, but... would I have to speak loudly? How would I have to speak to have the same voice?

C. No, it was no louder than the previous voice, but... it was mine. Whereas the one before... no, it wasn't mine... more impersonal.

J. A more impersonal voice. One last flashback, and then we'll stop there. Just to check, and then do it one more time completely. You sat down, and straight away I said: "You know, Chantal, I lied to you. I'm not going to ask you to think of an object. I'm going to ask you, right now, to think of an elephant". And then the screen is there. The voice is there. The image, the music corresponding to the image. And then a presence on the left of the screen, and your effort to place first all the details, the trees, the mud, the trucks. And then this elephant. And then this elephant that moves, and you know that the instruction has been followed. At that moment, I say to you: "OK"... Other elements that appear?

C. Just, when you said "OK", the light dimmed.

J. The light of the image dimmed.

C. The light of the whole thing.

J. The light of the whole thing. One more point: in terms of feelings, we haven't talked about it, but was there a succession in terms of inner feelings. Different inner states, or was it something continuous? I can see you are running through it again...

C. (.....) Perhaps an initial sensation with the first sketchy impression of an elephant, the feeling of something... beautiful.

J. The feeling of something beautiful.

C. And then another feeling when I made the other one appear, I was... I felt good that I had reactivated this image.

J. You felt good that you had reactivated this image. How did you know that you felt good? The feeling of feeling good, what is it? Where is it, what's it like?

C. (...) It's... in a way it's an absence of feelings... a sort of... balance.

J. A sort of balance. Well we'll stop there. Thank you, Chantal.

Notes

¹ For a review of the state of the art in subjective experience description methods, and a panorama of discussions about the validity of introspection, see three special issues of the *Journal of Consciousness Studies* on this question (Varela & Shear 1999a, Jack & Roepstorff 2003 and 2004).

² Titchener, who in the United States a century ago devoted his life to the development of introspection techniques, considered that the only valid data came from subjects intensively trained in his laboratory for months. His introspection training manual (*Experimental Psychology: A Manual of Laboratory Practice*), contained no fewer than 1600 pages. Before this training, "the average student, on entering the laboratory, is simply not competent to participate as an introspective observer in experiments" (Titchener 1901-1905, II.2, p. cliv). Schwitzgebel (2004) has written a recent analysis of the work of Titchener.

³ See the many articles by Gendlin provided on his Web site (www.focusing.org).

⁴ Reference may also be made to his many articles, most of which are available on his Web site (www.expliciter.net).

⁵ (Wallace 1999 and 2003) provide a description of these techniques.

⁶ This is why we will illustrate the difficulties and processes described with the help of examples whenever possible, to enable the reader in his turn to check the accuracy of these descriptions by himself, in his own experience.

⁷ This mind wandering has been studied by J. Schooler (2002, 2004) in connection with the reading process: the results of this study show that subjects are often unconscious of the fact that their mind is wandering, even when they are taking part in an experiment in which they are expressly requested to pay attention to these absences.

⁸ To use the expression of Piaget (1974a and 1974b).

⁹ In the vocabulary of Husserl (1913/1950), taken up by Sartre (1936, 1938), and then by Ricœur (1950).

¹⁰ According to Vermersch (1996, 1997b, 2000a, 2004b). I am indebted in this section to Pierre Vermersch, who described very precisely the difficulties we meet for becoming aware of our lived experience and verbalise it.

¹¹ See also Bowers (1984). The question of the possible distortion between experience and its representation has more recently been raised by Schooler (2002), Schooler & Schreiber (2004), Marcel (2003)...

¹² And right down to the etymology of the word "epilepsy": the Greek term *epi-lambanein* means "to surprise".

¹³ What we term meta-knowledge is the knowledge acquired by the researcher, after analysing and comparing different descriptions of the same type of experience, of a generic experiential category. Meta-knowledge is distinct from reflective knowledge (sometimes termed meta-awareness) by a subject of a dimension of his own experience, which does not require the recognition of this dimension as generic.

¹⁴ This is the reverse approach to that of the Platonic dialogue. Socrates' maieutics, the "art of delivering minds" consisted in fact of helping his interlocutor to turn his attention away from singular experiences to contemplate the general idea: "On the subject of virtues, however numerous and diverse they may be, they always have something in common, which makes them into virtues. It is towards this character that the eyes must be turned to answer the question and show what virtue consists of. Do you understand what I mean?" (Plato, *Meno* 72 c-d)

¹⁵ It is this experience that is so subtly described by Proust in *A la recherche du temps perdu* (1929).

¹⁶ The celebrated madeleine dipped in tea...

¹⁷ When it is possible, the "reliving" of the past experience may be helped by the visualisation of the videotaping of the episode. D. Stern uses this technique in his "micro-analytic interview", in order to study the subjective experience of mothers interacting with their babies (Stern 1985 & 1995).

¹⁸ Kinsbourne 1972, Galin & Ornstein 1974, Grinder et al. 1977, Ellickson 1983, Dilts 1983, Loiselle 1985, Buckner et al. 1987

¹⁹ The term "metaphorical" should be taken here in its etymological sense and not in its linguistic sense.

²⁰ For example, in the course of her semiological approach to the gesture accompanying the word, Geneviève Calbris (2003) has listed the various gestures that mime the action of "cutting" and the different types of iconic or metaphoric use of these gestures. Depending on the position of the hand (vertical, horizontal, parallel or perpendicular to the body), its movement (single or repeated), the use of one or two hands, the gesture of cutting expresses various ways of separating (from the division of a concrete object to the work of conceptual analysis), or interrupting a process (stopping on a path, whether it be spatial, spatio-temporal, logico-temporal or mental).

²¹ (...) indicates a long silence, a sign that the subject is taking consciousness of the pre-reflective dimension of his experience.

²² Referring to the American psychotherapist Milton Erickson (Bandler & Grinder 1975), whose technique Vermersch has adapted for the purpose of the explicitation interview (1994/2003).

²³ The interview may even take place in its entirety without any description of the content. I once interviewed a researcher for two hours on his sudden intuition of the "logical structure of quantum mechanics", without knowing or learning anything of the content of this intuition, by concentrating only on the structure, particularly visual, of its appearance.

²⁴ The visual and other sensorial submodalities have been explored in great detail by Neuro-Linguistic Programming (Dilts et al. 1980, Dilts 1983).

²⁵ Andreas & Andreas (1991) and Dilts (for example, 1998, p. 48) speak of the 1st position, 2nd position and 3rd position of perception. Gallagher (2003a; 2003b) introduces slightly different descriptive categories: first-person-egocentric perspective, third-person-egocentric perspective, first person and third person allocentric perspective.

²⁶ (Petitmengin 1999 & 2001) describe techniques for extracting meta-knowledge from interviews.

²⁷ "A certain kind of sentence can use a word beyond its usual meaning, so that it speaks from the felt sense." (Gendlin, *Introduction to thinking at the edge*, p. 2). This remark recalls something that Merleau-Ponty wrote: "I express when using all these already speaking instruments, I make them say what they have never said." (1953, p. 84)

²⁸ This is the question very precisely posed by Wittgenstein: "- Describe the aroma of coffee! Why can't we manage that? Is it because we lack the words? And for which details do we lack them? But from where do we get the thought that such a description is possible? - Have you tried to describe the aroma without succeeding? (...) James: "We lack the words." Why not introduce them then? What should the case be for us to be able to do so?" (1992, § 610 p. 291)

²⁹ This is not always the case (preictal experience, etc.).

³⁰ If this convergence has the value of confirmation, the lack of convergence does not signify that the descriptions proposed are inaccurate, as a large number of parameters can explain these variations (Vermersch 2000a, p. 285).

³¹ Pierre Vermersch (1994/2003) uses this expression to describe the rootedness of words in corporal experience, in the same sense as F. Varela, E. Rosch and E. Thompson in *The Embodied Mind*.

³² (Petitmengin 1999 & 2001) and (Depraz et al. 2003) provide examples of this type of work.

³³ This approach, which does not form the subject of this article, is described in (Petitmengin 1999 & 2001)

³⁴ The word "screen" is used to translate the French word "écran", which means a surface used to hide (screen) something else. This surface will then be used, in the rest of the experience, as a background for the candidate pictures. It must not be understood as an imaginary TV or movie screen.