Yoga as Research Tool

Towards rigorous research in the subjective domain

Matthijs Cornelissen
Sri Aurobindo Ashram
Pondicherry
matthijs@ipi.org.in

1. Introduction: Research about yoga and research in yoga

The editorial in the first issue of the *Journal of Consciousness Studies* (1994, Vol. 1, No. 1, p.8) argued that it should be possible to make use of the techniques developed in the various spiritual traditions to create more sophisticated forms of introspection. In this article I will try to show how yoga-based techniques and inner gestures can be used to provide rigour and reliability to research into 'inner' states and processes. Trying to bring yoga and science together as equal partners in the research process, raises a number of complex philosophical issues due to the substantial differences that exist in their underlying ontology and epistemology. I have tried to deal with those elsewhere,[1] and in this article I will focus instead on the comparatively simple question how yoga can help to make research in the subjective domain more reliable and progressive. I hope to show that on this more down-to-earth level, research in yoga and research in the hard sciences need not differ as much as one might think at first sight: there are fundamental differences, no doubt, but there are also many similarities in the basic processes by which both systems safeguard the reliability and integrity of their otherwise quite different types of knowledge.

When we think of what yoga can contribute to scientific research, and especially to research in the field of psychology, we can think of two entirely different types of research: research *about* yoga, and research *in* yoga. The

first type of research, research *about* yoga, works within the limits of existing science, and distils from the Indian tradition only those theories and techniques that science can assess by its own well established research methods. Following this approach, one can try, for example, to extract from the Indian tradition theories that are explicitly or tacitly present within Indian texts and practices, reformulate them in a terminology that is understandable and meaningful to contemporary psychology, derive hypotheses from them, and test these with existing research procedures, whether quantitative or qualitative (Sedlmeier, forthcoming). Similarly, one can look at the various schools and sub-cultures that together make up the Indian tradition as a source of practical techniques to produce positive psychological or physical change. In this case, one can 'administer' such techniques to groups or individuals and test the result, again with well-established research procedures (Mohan, 2001; Walsh & Shapiro, 2006).

As a whole, this first approach is from a scientific standpoint non-problematic, and virtually all major research projects on meditation and yoga till date belong to this type (Murphy, 1997). Though such studies have their use and value, to limit research on yoga and meditation to this approach is in the long run not satisfactory because it treats the psychological knowledge-base that the Indian tradition has created as a historically dead collection, without wondering how its ancient and modern sages actually arrived at their knowledge, and how their work could perhaps be taken further. In other words, this approach misses out on what might well be one of the most valuable contributions which the Indian tradition can make to science: its research methods, its ability to tackle in an intellectually rigorous manner all those aspects of life that are not primarily physical, and that are not always directly or fully available to the ordinary waking consciousness. This 'inner' realm contains according to the Indian tradition not only the dark subconscious corners associated with the Freudians, but also a wide range of more uplifting subtle worlds where one can find one's real identity, the possibility of a direct contact with the Divine, the source of true knowledge, love, values, meaning, a sense of oneness, beauty, harmony, and truth, and even the origin of much of our ordinary behaviour. If there is some truth in all this, then it might well be

that the rigorous subjectivity, which the Indian tradition originally developed in order to get reliable knowledge of the Self and the Divine, could provide us with a powerful method to study not only the higher ranges of consciousness, but also the mechanisms underlying ordinary life in all its complexity.

To enter into the source from where the Indian civilization collected its magnificent body of psychological knowledge and practical know-how is, however, not easy and it is impossible as long as we insist that all scientific research has to be objective. The research methods the Indian tradition used in the psychological domain were sophisticated but essentially subjective. So to come to a serious integration of the Indian knowledge systems with modern science requires as a precondition the acceptance -- and in due time, the further development -- of research methods that are thoroughly subjective and yet intellectually rigorous, however incompatible this combination may look to us.

Collectively modernity has achieved a much higher level of sophistication in terms of objective research methodologies than in the area of first-person, subjective studies, and mainstream science does its level best to be as 'objective' as possible. Even when, in psychology for example, subjective experience is accepted as a legitimate area of interest, the subjective element tends to consist of relatively unsophisticated, spontaneous, lay self-assessments that are embedded within a sophisticated objective framework of statistics, textual analysis, or biochemistry.[2] Similarly, spirituality tends to be studied 'objectively' as the beliefs and experiences of others, but only rarely as an, at least potentially, valid approach to knowledge as such (Forman, 1990; Varela & Shear, 1999; Walsh & Shapiro, 2006). In itself our present focus on 'objectivity' is not difficult to understand, but the result has been unfortunate for psychology and with that for society, as this stress on objective methods has led to a serious impoverishment of our collective understanding of what it means to be human and of the more subtle, 'inner' aspects of reality. Modernity has left inner knowledge and spirituality almost entirely to faith- and dogma-based religions and to often unselfcritical new age movements in the margins of public life.[3] But for this, these things are too important: they deserve to be studied with all the intellectual sincerity and rectitude that are

part of science. The amazing thing is that our collective incompetence in the subjective domain is a form of voluntary blindness, because humanity has actually developed a whole range of powerful intellectual tools that are explicitly meant for rigorous inquiry in the subjective domain. In this article I hope to show how some comparatively simple techniques of yoga might help to put us at least on the way towards a more reliable, rigorous and effective study of these 'inner' realities.

To put the difficulties and possibilities of rigorous subjective research in perspective, I will first show to what extent subjective and objective studies can both be conducted with the same intellectual rectitude and rigour. Next, I will try to remove a few common prejudices against subjective research. Once this conceptual space is created, I will indicate some of the genuine problems encountered by subjective research, and show one of the wonderfully clever and logically coherent ways by which the Indian tradition has managed to overcome them. Finally I will say a few words on the role of literature study and try to indicate what kind of practical arrangements might help to deal with the many difficulties that such a new approach to psychology undoubtedly will encounter on the way.

2. Similarities between subjective and objective research

To start with the most obvious, yoga and science are both considered difficult, and rightly so. They are not for everyone, and they require the utmost sincerity, intellectual rectitude and effort of the individual. Besides this, they also involve a number of social support structures that consist of the same basic elements. It does happen, for example, that individuals take up yoga or science entirely on their own, but much more typically they do it in small groups, whether these are schools and labs, or *gurukuls* and *ashramas*. The idea is clearly that to have some chance of success, the often considerable efforts of the individual need to be supported by a surrounding that shares the same ideals and objectives. Both endeavours are furthermore supported by an extensive body of literature; there is a largely implicit common understanding

on what within the specific school is accepted as 'true', what can legitimately be doubted, and what can be fruitfully researched; there are well-established techniques, procedures and 'best practices'; and finally, both in yoga and in science young researchers are guided by a more or less complex network of peers and elders.

Another important area of similarity is that of the assessment of the quality of the work. Though yoga tends to be done in a very different atmosphere, where assessment does not play the same role as in the scientific setting, in principle, the same elements that help to assess the quality of research in the objective sciences can also help to assess with yoga when treated as a subjective research methodology. For example, the quality of the work itself can be assessed in terms of :

- the clarity, depth, detail, subtlety, and comprehensiveness of observations, descriptions and interpretations;
- the transparency of the processes followed;
- the freedom from known sources of error, inconsistencies and obfuscations;
- the robustness and 'authenticity' of the results;
- the internal coherence;
- the coherence with other findings or, where there is not, a sensible explanation for the lack of it;
- the originality, newness and/or usefulness of the findings.[4]

The quality of research is to quite an extent dependent on the quality of the instruments used, and in the case of subjective research, the main instruments are the (inner) cognitive faculties of the researcher him or herself. Their quality can again be assessed in terms of:

- clarity of thought and perception;
- awareness of potential sources of error and distortion;
- awareness of other limitations and willingness to deal with them;
- depth and width of insight in this and related areas of enquiry;
- the quality of other work done in the area concerned;
- the quality of work done in related areas;

- ability to help others go beyond their understanding in the area concerned.

In the case of yoga, the people who can assess the quality of the work, are:

- the guru or spiritual guide overseeing the project;
- peers and elders with expertise and skill in the relevant area;
- users of the 'technology' that flows from the discoveries.

It may be noted that all these processes contribute and yet are fallible: in spite of one's best efforts, sometimes poor work will be praised and sometimes good work will not be recognised. But this is true for all types of research (or human endeavour for that matter). The important issue here is that the difficulties that the two types of research encounter in the areas mentioned so far, are not essentially different, neither in type, nor in degree.

There are no doubt also differences, some of them substantial. Modern scientific literature is, for example, not the same and cannot be approached in the same manner as ancient spiritual texts, and the typical 'job-description' of a research guide and a guru are not exactly identical. The main differences between the two, however, seem all to stem from the simple fact that the basic stuff of the hard sciences is matter, which can be studied 'objectively' by our outer senses with the help of mathematical modelling and physical instruments, while the basic stuff of research in yoga is consciousness, which has to be studied subjectively by our inner senses and a subtle, inner instrumentation. We will now look at some of those differences and the problems they produce.

3. Problems with subjective research

3.1. The problem of 'privileged access'

'Subjectivity' has presently such a strong connotation of being beyond (or rather below) public scrutiny, that many a guardian of science will reject the whole idea of subjective research offhand as an irremediable self-

contradiction. One of the arguments that is often brought up against rigorous subjectivity as a valid research option is the notion of 'privileged access'. The idea is that each human being can have only access to his or her own consciousness. In other words, when I do objective research on some aspect of the outside physical reality, others can check my work because my data reside in the shared physical universe, while when I do subjective research inside my own consciousness, my data are only accessible to my own isolated self. This may sound at first sight plausible enough, both as an assumption and as a definite and final condemnation of the whole enterprise of research *in* yoga, but neither the conclusion, nor the assumption stands scrutiny.

Contrary to what may appear, even if it were true that others cannot have access to someone's consciousness, this would, by itself, not pose any serious problem for subjective research. The reason is that science is not interested in what happens in one particular person's consciousness; what science is interested in are general processes. Accordingly, the normal procedure that is used in science to corroborate someone's findings is to have someone else reproduce the same results by using similar instruments in similar circumstances. So, if in psychology someone makes an assertion about certain processes that according to his subjective judgement have happened in his consciousness, all that is required is that somebody else who fulfils the right preconditions can reproduce similar processes in his consciousness. Whether that first person's consciousnesses was private or not does not come into the picture at all. There are many checks and counterchecks in science but going back to someone else's raw data is not a major part of the routine, and in fact, it is possible only since computers keep permanent records of events. Till computers began to record instrumental results, all one could check were laboratory notes, and those one can keep of inner as well as outer events.

Interestingly even the original assertion that consciousness is intrinsically private may not be as absolute as it seems to be. There is an enormous mass of anecdotal data about ordinary people becoming aware at a distance of what their loved ones go through (esp. at a time of crisis), and in the Indian tradition the ability to know what goes on in someone else's mind is widely held as a

sensitivity that can be developed.[5] It is in fact thought that a guru or spiritual guide who knows his own deeper self well, may know better what happens in the consciousness of his disciples than they know themselves. One may protest that, in spite of all the parapsychological research, the possibility of telepathy is still disputed, but the disbelief in parapsychological findings may be more complicated than it looks at first sight. The very fact that there are people who deny the possibility of telepathy in spite of all the research that supports it (see, for example, Delanoy, 2005), research that is far more solid than research in most other areas of psychology, might indicate that the demand for 'hard' physical proof may not be as relevant to questions about the inner worlds as is generally assumed. The demand of physical proof is no doubt appropriate for events in the physical world, but it may be worth questioning seriously whether for processes that take place entirely within the subtle realms it may not be misconceived. Just as the truth of what physicists say is not dependent on corroboration of their findings by mystics, it may not be reasonable to ask for physical corroboration of inner events. This may seem preposterous, but it is worth thinking it through seriously. There is much to be said in favour of taking the inner worlds on their own terms, and to explore them in a manner that is appropriate to their own characteristic nature.

3.2 The malleability of the mental consciousness

One genuine difference between the outside and the inside 'stuff' — roughly, matter and mind — is that the mind is so much more malleable than matter. By itself this is a great asset of the mind and it can become a legitimate and in some cases important object of study.[6] But it does make studying mental processes in some ways considerably more difficult than the study of matter. The combination of the malleability of mental consciousness with the limited knowledge we have of our own inner states and the often highly complex and largely subconscious interests that we have in the outcome of our inner enquiries forms the core of the difficulty with ordinary introspection. Because of the flexibility of the mental consciousness, our inner states and drives can very easily have an effect on the surface processes we want to study, and because we are not sufficiently aware of the subconscious deeper layers that

influence these surface layers, we tend to influence the processes we want to study to a much larger degree than we are normally aware of. The Indian tradition has not walked away from these difficulties, but has tackled them in an intellectually coherent, but exceedingly radical manner. We will now have a look at one of the methods it has used, and see why this method can be expected to deliver the rigorous, reliable knowledge in the subjective domain we are looking for.

4. The Indian solution: Yoga as research methodology

4.1 Introspection and the witness consciousness

In the ordinary waking consciousness, introspection is the main route by which we can look somewhat objectively at what goes on inside our own minds, but, as we have seen, it is a method that has several serious drawbacks. Seen from the perspective of the Indian tradition, these shortcomings all derive from the fact that in ordinary introspection, one looks with one part of the surface mind at what happens in another part of the same surface mind. This severely limits our capacity to look inside for three closely related reasons. The first is that the conscious surface mind seems capable of doing only one thing at a time: where we seem to be aware of two or more actions simultaneously, it is argued that we actually jump up and down between them. To use an old but clear image: one cannot be on the balcony and in the street at the same time, so in traditional introspection where one is both the spectator and the actor, one has to jump up and down between the balcony and the street below. In other words one does not really watch what happens in one's mind in real time (which would lead to problems of infinite regress) but one watches the memory trace of what happened just before. Titchener literally advised for more complex movements like anger, to let the process play itself out in its entirety, before 'retrospecting' the whole sequence in one's memory (Titchener 1898, p. 28, quoted in Adams 2000). The second is that in our ordinary waking consciousness, an entirely unbiased introspection is impossible. In Titchener's words: 'We can hardly, with the pressure of tradition and linguistic forms upon us, consider mental phenomena in a really naive way, with a truly blank

prescientific impartiality.' The third factor is something of which Titchener and his colleagues seem to have been less aware. It is that even though their highly trained introspectionist observers could detail out mental processes and sensorial impressions with impressive detail, they did not reach below the immediate surface of their awareness; they did not reach the greater depths that meditation makes accessible.

Though in modern psychology not much value is attached to introspection, it is still seen as the main way to observe what happens inside ourselves, and one finds its language used even in modern texts about Buddhist meditation. It is true that beginning meditators tend to fall into this 'introspectionist' trap: instead of silencing the mind they move to and fro between their usual thoughts, feelings and sensations, and an equally noisy running commentary on these very same thoughts, etc. But this is not what meditation is about. Though this is not always recognised by modern authors, the process of self-observation used in yoga and Buddhist meditation is of an entirely different nature.

The Indian tradition does not accept that the thinking condition, which the beginner's attempts at meditation and ordinary introspection have in common, is inevitable. It looks at it, in the language of Vedanta, as an unfortunate entanglement of our conscious essence, *atman*, with the activities of the mind, *manas*. The entanglement shows itself in the fact that in the ordinary waking state most people identify with their body, feelings and thoughts. The archetypal example of the latter is perhaps Descartes (1641/1931), who in his famous '*cogito ergo sum*', made his entire existence contingent on being a 'thinking thing' (a *res cogitans*). One can find this tendency to conflate consciousness with 'thinking' throughout Western thought, though the development of apparently unconscious machines that can at least imitate human thought is slowly beginning to make space for a more subtle understanding of their relationship. The Indian tradition recognised identification with one's thoughts as a beginners' error, at least since the time of the fascinating story of Indra and Virochana in the *Chandogya Upanishad* (8. 7-12).[7]

It is not possible to do here justice to the full complexity of yoga as knowledge system, for that there are too many different approaches and methods, but for the limited purpose of indicating why the Indian systems of yoga can manage where Western psychological research has failed, we need to focus only on one element of yoga: the possibility of freeing one's consciousness entirely from the processes that go on inside it. One finds this possibility mentioned in various forms throughout the tradition. Most schools of Indian thought attribute human suffering in the end to ignorance, and in the language of the Saṁkhya, the defining characteristic of the ignorance is an erroneous identification of our true Self, *puruṣa* with the limited movements of Nature, *prakṛti*. The cure consists then of two main processes that are mentioned in virtually all schools of yoga. The first is a shift of the centre of our consciousness away from *prakṛti* till it is fully centred in the *puruṣa*, the ultimate essence of our being. The second process takes place within the domain of *prakṛti* under influence of the *puruṣa*: it is the purification and ultimately transformation of one's nature.

To the extent that the first movement can be completed, our consciousness frees itself from its habitual entanglement in egocentric thoughts, feelings and sense-perceptions and becomes peaceful, silent, and capable of watching whatever happens in the nature as a pure witness, *sākṣī,* without bias, reaction or involvement. We will discuss in the next section whether achieving an entirely 'pure' consciousness should e considered theoretically possible or not, but for the practical purpose of research this is not required. If we can project astronomy once more as our model science, astronomy not need lenses with an absolute perfection, all it needs are lenses that are 'pure enough' for the work at hand, and the same holds for our inner instrument of perception. If we can manage to watch the inner world with a 'pure-enough' witness consciousness we will have achieved the good side of 'objectivity' -- reliability, impartiality, clear-headedness -- without limiting ourselves to the ordinary waking mind's appraisal of the physical and social external world. It may be noted that once one has freed one's consciousness sufficiently from its identification with one's thoughts, feelings, sense-impressions, etc., one develops not only an

extraordinary ability to watch one's outer and inner movements dispassionately, but one also gains the power to make one's consciousness do things that in the ordinary waking state are not possible, at least not to the same extent. Typical examples mentioned in the literature, and verifiable in personal experience, are the ability to move around at will in types and layers of consciousness that are totally different from the ordinary mind, or more difficult and contentious, the ability to feel and even influence, as if from within, what others experience. It may be clear that if such skills (or *siddhis*) would be found practically achievable, they would be invaluable for psychological research, though not without danger: If the outer nature would not be 'pure' enough, these inner powers could lead to serious abuse. Lack of purity could also lead to all kind of distortions and limitations during the secondary phase of expressing what has been observed during the period of pure inner silence, so for serious research in the inner domain both the detachment and the purification of the nature are crucial.

I will not go here into detail about the methods to achieve the pure witness consciousness and the powers that go with it, or the processes needed for the purification and transformation of the instrumental nature. For those who are interested, there is plenty of literature on those. Here I only want to say a few things about the somewhat peculiar, circular relationship between the purification and the detachment.

4.2 The relation between the liberation of the Self, and the transformation of the nature.

As a very general rule, some preliminary purification of the nature is required for the consciousness to be able to extricate itself from its surface activity: Strong desires, fears, aggression, ego-sense, mental rigidity and ambition all make it more difficult for the Self to stand back and watch. Absolute purity is not essential however, and even a complete liberation of the *puruṣa* from the *prakṛti* is possible while the outer nature is still in a more or less chaotic state. If all we want is an inner sense of freedom, then this does not matter, and keeping the outer nature sufficiently quiet to reach the state of a pure witness consciousness is enough. However, if we want to use yoga to increase our

knowledge of psychology, then it is necessary to go further and turn one's outer nature into a reliable instrument with which one's innermost Self can express itself. A certain initial change of the nature takes place automatically as an immediate result of the inner freedom, but this is not sufficient. If we would compare the complexities of our psychological nature to that of an army, then one could say that a change of 'chief commander' will have an effect on the behaviour of the army as a whole, but the individual troops will not immediately change. For that a new chief commander who watches what is going on with a benevolent smile is not enough; a sustained and skilful effort from the central command is crucial. To come back to the language of yoga, one has to move from the witness consciousness (*sākṣī*), which is only the passive *puruṣa*, to the *puruṣa* who is also the 'upholder' (*bhartṛ*), the sanctioner (*anumantṛ*), and finally the knower and master (*jñātā īśvaraḥ*) (Aurobindo, 1972, pp. 610-612). The further one moves in this direction, the more it becomes possible to bring each little element of the nature under control of a higher consciousness, turning it first into an obedient instrument and ultimately into a perfect expression of the Self. This involves, undoubtedly, an exceedingly difficult transformation of the nature. A such it also involves an effort that goes beyond the already difficult project of individual liberation that some more limited forms of traditional Vedanta are content with. But it may be clear that to the extent that it can be done, it will provide us with a sophisticated 'inner instrumentation' for psychological research. It is now time to see whether all this is just a little cloud of idealistic moonshine, or that it is, as I think it is, a practicable approach to psychological research.

5. Four objections against the use of the pure witness consciousness in psychological research

There are four objections that are frequently brought up against the idea of using inner silence as a research tool. The first is that it is simply not possible. The second is that even if it were possible, it would still not be able to say anything much about the noisy ordinary consciousness. The third is that even

if it were both possible and useful, it would still be too difficult to be practicable as a research tool: it would require psychologists to be enlightened before they could do any useful research. And finally, that if it were possible, useful and feasible, it would still lead in its ultimate pursuit to the ineffable, and the ineffable has, intrinsically, no message for science and practical life.

5.1. Is pure consciousness possible?

The very possibility of pure consciousness has been doubted on the one hand by authors like Katz (1978), who argue that all experience is socially mediated, and on the other by Jung who says that all consciousness has to have an ego at its centre. The arguments of Katz have been countered, I think effectively, by Robert K.C. Forman (1990, 1998), who shows on the one hand that the whole idea of the inner exercise is to empty the consciousness of all culturally mediated content, and on the other that there is no good reason to presume that none of the many authors who describe the state of Pure Consciousness did succeed. The objection by Jung is actually not an argument but a simple statement of the limited range of states of consciousness that Jung was willing to recognise as such. Both get in the end undone by experience, just as happened with the theories of the 19th century physicists who argued against the possibility of a 'horseless carriage' or a 'heavier than air aeroplane'. Their theoretical arguments were quietly forgotten once the first trains moved and the first planes flew. Experience tells that a state of clear consciousness without an egoic centre is possible, and that once that state is established, it can discern what happens in the mind with far greater reliability, accuracy, and detail than what is possible with the noisy, ego-centric ordinary consciousness. The only hitch is the word 'experience': About whose experience are we talking? Experience recorded in ancient texts are looked at with suspicion by the modern mind, and, in contrasts to the trains and planes brought up earlier, one cannot just tell an unbeliever to see that it works with his own eyes. Unless the person happens to have a silent mind as a rare innate gift, his or her inner eyes need training, and even with training not everybody gets it. Again, by itself this is not an insurmountable hurdle. Even in the hard sciences one can trust or disbelieve what is said by science without testing it for oneself, or one can do the needful and get one's own experience, and the

latter may not necessarily be easy. Not everybody can understand advanced mathematical proofs, and certainly not everybody has the skill and the equipment to replicate sophisticated biochemical experiments or astronomical observations. Yet people tend to take both seriously, and rightly so. Similarly not everybody is equipped to test the claims of yoga, as not everybody who starts yoga manages to silence his or her mind effectively. But the fact that not everybody can experience or do something does not at all go against it being real. If that were true, not only higher mathematics and astronomy, but even the ability to read and write should be distrusted.[8] Collectively, the solution will come probably only when a certain critical mass is crossed and even those who have no direct inner opening to the possibilities of yoga themselves, will still begin to see the benefits of yoga-based research in the people around them.

5.2 What has the silent inner consciousness of the yogi to do with the ordinary mind?

The second objection against the use of pure consciousness as a research tool in psychology is that the process of withdrawal and becoming a pure witness involves serious changes to one's inner state, which makes it unfit to study the ordinary processes of the mind which are far from silent and pure. It is often held that as a consequence this is not a good method to see how human nature really works by itself. The answer to this objection runs on similar lines as the answer to the problem of privileged access; here also it is useful to consider the way research in physics is organised. Physics hasn't achieved its amazing mastery over electromagnetism, for example, by focusing exclusively on the spontaneous, and complex manifestations of electricity and magnetism in nature. What science is interested in, are, after all, not the surface phenomena as such, but the details of the underlying processes. So one studies electromagnetism by making use of the little one knows to create a piece of equipment that shows how electromagnetic forces work in some entirely artificial and constrained circumstances. From the results, one gains some further knowledge and mastery, and on this new basis one constructs a more sophisticated instrument that can answer more complicated questions. In this fashion one gradually builds up an increasingly sophisticated and

comprehensive knowledge and mastery. With all that new knowledge, one can then come back to natural processes like the magnetism of the earth, but one can also do entirely new things, like making cell-phones and internet-based computing. Progress in Yoga takes place in an essentially similar fashion: with the little one knows about oneself one tries to 'stand back' and watch oneself dispassionately. While trying this, one encounters various problems and in one's attempts to overcome them one learns more about one's own functioning, and so one slowly builds up an increasing clarity of inner perception and mastery over the subtle psychological processes that take place inside oneself. With that increasing inner clarity one can then look at other psychological phenomena and discern the subtle processes at work in those areas, and this in its turn may help in becoming a still better, still more detached witness. As the process continues, both one's insight and one's self-mastery gradually increase.

Central to this argument is the nature of 'pure consciousness', an unfortunate term, as it seems to imply a single state, while it is actually a family of states, of which the members differ according to what exactly the consciousness is free from. The form of 'pure consciousness' that psychological research needs does not demand that absolutely nothing happens in one's consciousness; it only demands that the observer does not get in any manner 'carried away' by whatever happens in the consciousness: the observer needs to remain centred in, and identified with, a deep inner silence, irrespective of what happens on the surface. When this silent state is used to study the ordinary human mind, one can watch from a position of pure inner silence how the movements of the ordinary human nature take place, without getting carried away by them.

5.3 Yoga is too hard to use as a tool for psychological research.

The third objection is that reaching the state of a perfectly detached witness consciousness is not easy and that it can be reached at best at the end of a long road. Luckily useful research can start long before this. As each individual is unique, each individual has her own possibilities, and also her very own difficulties to conquer. Each individual has thus a unique area of research cut out for him or herself, something special that should be in harmony with the

peculiarities of his or her *svabhava* and *svadharma* (one's soul-qualities and the law of one's individual being) and the circumstance he or she lives in. And yet, because we are all connected, and because we are in so many ways built on similar plans, such individual findings will be of interest to others.[9] It is clear that spiritual giants like Sri Ramakrishna, Swami Vivekananda, Sri Aurobindo, will produce more psychologically interesting knowledge than others, but even beginners may discover insights and techniques that are useful for others in search of psychological insight and mastery. Even if some of this work may be of use to only a few, all this inner labour together will add up in one way or another to our collective understanding of human nature.

5.4 Entry into the ineffable

The ineffability of inner states is another often-cited argument against research in yoga, but ineffability is a relative term. At one extreme, one could argue that all experiences are 'inner' and as such ineffable, but this would invalidate all experience-based knowledge, and this includes all scientific knowledge. It is more practical to stick to the perhaps naïve idea that one can actually communicate with someone else about one's experiences as long as the other recognises them as similar to his or her own experiences. The first occasion where the problem of ineffability then arises, comes when the other never had a similar experience. The crude, but archetypical example of this kind is the impossibility of fully explaining the experience of colour to someone who is genetically colour blind. In a similar vein, it is argued, one cannot share an inner experience with someone who never had anything like it. There is no doubt some truth in this, but, as usual in the subjective domain, things are not that simple. In yoga it is widely held that knowledge comes basically from within, and as a consequence people can sometimes have a kind of 'pre-knowledge', a vague sense of what the real experience might be, before they actually have it. There are also certain experiences of which at least a shadow can be transferred to the mind of someone who has not actually had that experience himself. Still, there are limits to the extent that this is possible: there remains a gap between reading about a country, visiting it, and actually living there, and the gap increases if the 'other country' is not just another mix of known elements, but something of a radically different character.

Limitations on the side of the receiver are, however, not the only place where the problem of ineffability arises. Ineffability can also arise at the level of the language used, and even during the experience itself. Language problems are frequent in the spiritual field, partly because mystics and mystical schools often communicate within their own circle and develop their own specialised use of common words. This is so not only in English, but even in Sanskrit where words like *samadhi*, *manas* and *vijnana*, have been used with very different meanings by different schools in different periods. Though this is at present the source of endless confusion, especially when people try to compare and link different schools from different periods, this problem can in principle, even if not always in practice, be solved by simple intellectual rectitude and willingness to listen to the other side.

A more difficult situation arises when the ineffability exists on the side of the person who has the experience that is to be conveyed. There is a weak and a strong form of this. In the weak form the experience is difficult to describe either due to lack of clarity on the side of experiencer or due to the fact that there are no commonly agreed terms for the sensations felt as the sensations don't occur commonly enough. In both cases someone more familiar with the inner state (or simply more capable as word-smith) may help the experiencer to find the right words to express the experience. The most interesting, but intellectually most intractable type of ineffability is, however, the strong form of ineffability on the side of the experience: the situation where the state itself is ineffable, not just in the weak sense of being hard to describe, but in the strong sense of a consciousness that has no content in any sense-modality. There is then in the most literal sense nothing to describe, while yet the states just before and just after indicate that it is a state of increased, not a state of diminished consciousness. Sri Aurobindo seems to indicate that this type of strong ineffability can, in certain cases, still be due to a simple lack of inner skill. This is the case for example when one carries no memory of certain higher states due to an undeveloped, unconscious stretch on the way into and out of that alternative state. As one's experience increases one can then learn to bring more back from these inner states and in the end one can 'bring down'

their essence so completely that one can actually be simultaneously in the higher state and in the ordinary consciousness.[10]

One could argue that with this, we have definitely left the terrain of science in favour of some vague, mystical heavens far beyond the shared reality, but it may be an error to limit psychology to what is understandable by everyone. After all, astronomy would have got nowhere if it had limited itself to what the average layperson can see with his unaided eyes, and neither would have physics if it had limited itself to so much of mathematics as the average postgraduate remembers from primary school. If we consider it good for physics if physicists are allowed to study the extreme limits of where the human intellect can reach, we have little reason to deny psychology the option of exploring the extreme limits of what human consciousness is capable of.

6. A few words on philosophical premises and scriptural support

This article has no other intention than to clarify some immediately practical aspects of the introduction of yoga as an aid to subjective research. Still, this story would not be complete without at least a few words about the philosophical premises on which subjective research in consciousness has to operate.

The two psychology-related 'techniques' from the Indian tradition that seem to have spread most widely within the global civilization are probably yoga-asanas and vipassana meditation. Their proliferation has certainly been helped by the fact that they can be introduced 'philosophy-free', and it is tempting to do the same with research in yoga. As we have seen, this can be done to a greater extent than one might think at first sight. To take up subjective research with the aid of yoga, it is essential to accept only two very basic assumptions about reality: 1) that consciousness exists in different modalities, and 2) that we as humans can learn to modify at will the state of consciousness we are in. This is certainly not asked much, and even a little experience will for many be enough to continue one's explorations.

'Doing yoga' without philosophical support has, however, its dangers, even, or perhaps especially, within a research setting. A typical example of what can go wrong when ancient concepts and techniques are taken out of their original cultural and philosophical setting is the tendency to equate the Indian concepts of *moksha* and *mukti* with the American concept of 'self-realisation'. What were in their original context indices for a complete liberation from all traces of ego and ignorance, have turned into props for the ultimate individual self-aggrandizement. Subtle and not-so-subtle shifts and distortions of this type are probably inevitable when two civilizations mix, and one can only hope that in due time they will be sorted out, but they are symptoms of a serious problem. Without proper maps and knowledge of the terrain one can get easily stuck in quite unnecessary side-tracks and dead ends, or one can think that one has reached the summit while all one has seen is a distorted shadow of the peaks in the old mind's turbid waters. Concentrating too much or too exclusively on philosophy and ancient texts has, however its own drawbacks. The capacity to juggle effectively with powerful words and concepts can easily give the illusion one actually knows what one is talking about, and the Indian tradition is full of trenchant stories about small, unlettered girls who prove to be wiser than the self-righteous pandit. For a complete understanding one clearly needs both conceptual clarity and direct experience. This is not only true for the individual but also for the field as whole. An open exchange between Sanskrit scholars, philosophers, psychologists and those who have focussed their efforts on direct experience might well provide the most fruitful soil for collective progress. And yet, in the end even insight and experience are not enough: yoga, however it is done, still involves serious risks. It deals after all, with the very foundations of who we are, and so it remains a bit like trying to repair (or even remodel!) one's car while driving. Besides the help of a competent guru, the only real safeguard is one's sincerity and humility.

7. Conclusion

In this article I've argued that the standard, objective study of yoga misses out on one of the most interesting aspects of yoga: the possibility of using it as a tool for rigorous research in the subjective domain. Contemporary Psychology is confronted with several serious problems that are inherent in its present exclusive reliance on objective research. I've tried to show that the basic set of checks and counterchecks that make up the essential core of science's unrelenting self-critical search for truth can be used equally well for subjective as for objective research, and that several of the most commonly heard objections against subjective research can be shown to rest on little more than unsustainable prejudices. This is of course not to deny that there are difficulties with subjective research: the basic stuff that subjective research has to deal with is not matter, but consciousness, and this has major consequences which should be taken seriously. For the study and mastery of matter, we have learnt to rely on the development of ever more sophisticated mathematical models and physical instruments. For the study and mastery of consciousness these are of little use and science has still to find the appropriate methods, as it is very clear that the ordinary introspection cannot be relied upon. I've argued that the Indian tradition has found many radical ways of dealing with the difficulties inherent in the subjective realm, and I've indicated some salient aspects of two of these methods which together might help to create the 'rigorous subjectivity' that is needed for reliable research in the subjective domain: 1) the liberation of one's consciousness from the workings of the mind, and 2) a drastic purification and transformation of one's nature.

An important question is whether we have reached the stage where the inner and outer forms of research can be usefully integrated. It is possible that research *in* yoga may need to be pursued, at least initially, as a fairly independent, complementary quest for knowledge. Collectively we are very far behind with the development of a true science of the subjective domain, so we may have to give it time so that it may grow into an independent branch of science that is built on its own fundamental assumptions about the nature of reality and knowledge, and that, perhaps most importantly, has its own,

mentally coherent and methodologically rigorous methods to arrive at the type of valid and reliable knowledge it searches for. I have little doubt, however, that in the long run the two knowledge systems of subjective and objective research need to be integrated, as they deal with two sides of what is ultimately only one single reality. A full integration may, however, require a profound change in our understanding of the fundamental nature of reality. Till then, it may be wise to include in actual research projects separate elements of both -- of standard objective mainstream research, and of the new subjective yoga-based research -- so that individual guides and students can choose at what proportion of each they feel comfortable. This might mean that for a long time, at least some research will have to be undertaken in collaborative projects between academic and spiritual institutions so that one can make optimum use of existing expertise in both areas. One could, perhaps, compare this with a common feature of applied research in the hard sciences, where research projects are executed in a close cooperation between labs at universities and labs at industrial establishments.

In whatever direction research in yoga may evolve, our first task will be to create the space in which purely subjective and yet rigorous research can take place. Once one gets deeply into the nitty-gritty of subjective research, things become quickly rather complex, because they involve a wide range of types of consciousness and inner worlds that all follow their own laws, but right now it may be too early to deal with all this. We have first to remove the conceptual and emotional prejudices that stand in the way, and we have to put in their place the basic structures that are needed to make a serious attempt at inner research possible. In the end humanity needs both, objective as well as subjective research.

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Endnotes

[1] For an exposition of the Vedic concept of consciousness and reality on which this article is based, one could consult Cornelissen (2008), and for some of the epistemological issues, Cornelissen (forthcoming).

[2] The relation between objective and subjective knowledge is actually rather complex. One could well argue, for example, that within the hard sciences, mathematics is a form of systematised intuition, and as such essentially subjective, and that the main job of scientists is the making of models, which are archetypal bridges between what in the ordinary waking consciousness appears as the inner subjective and the outer objective reality. An interesting analysis of the dubious nature of the subjective-objective distinction within psychological research can be found in the work of Max Velmans (2001). All I mean here with the objective-subjective distinction is whether the perceived reality can in some manner be made sensible to our 'outer', physical senses.

[3] Transpersonal Psychology could be considered a notable exception, in spite of some serious problems, both with its rigour and its philosophical foundations (see Ferrer, 2002, p. 87). For a more positive view of the relationship of yoga and transpersonal psychology in terms of methodology, see Braud, 2008 and forthcoming. For an Indian view on the value of phenomenology in advanced subjective enquiry, see Rao, 1998.

[4] Newness is not normally associated with work in the field of yoga, where it is widely held that the ancients new everything worth knowing, but if we look at the great yogis that history remembers then we see that they actually are remembered for the new elements they introduced. We will see in section 6.3 how 'newness' can be a factor even in research in yoga by relative beginners.

[5] It is a fairly common experience that once the surface 'noise' of the mind stills, one becomes not only more aware of what happens deep inside oneself, but one can also begin to become more aware of what happens inside others. One discovers then that the physical world is not the only shared reality; feelings and thoughts belong to shared worlds of their own. It is as if people are only in their surface consciousness fully 'skin-encapsulated', while on these deeper layers they are quite closely connected.

[6] An important field of inner, yoga-based psychological research is, for example, to establish which emotional states, attitudes, mental sets, processes and inner gestures make various inner phenomenon appear or disappear.

[7] In psychiatry, not to 'own' your thoughts etc. is commonly considered a sign of serious pathology, and considering the population that psychiatrists typically deal with, this is understandable. A useful way to look at this apparent paradox, is to consider normalcy as an intermediate layer in which it is indeed healthy to identify with one's own thoughts. Some people cannot sustain this identification and fall out of this layer downwards due to some weakness, commonly a simple incapacity to deal with the pain it engenders. There are others who climb out of this layer upwards with the strength of their soul, but they rarely visit the psychiatrist. Things are not that simple of course and there are mixed cases, but from my personal experience I would say that they are relatively rare. A useful analysis of the differences between pathological and yogic deviance from normalcy can be found in Liester (1996)

[8] The underlying psychological problem may well be that it is hard for people with a great intellectual capacity to accept that intellectual skill does not necessarily predispose to sensitivity and control over the more subtle layers of one's consciousness: these seem to be independent gifts.

[9] A student described this possibility of understanding others by understanding oneself very nicely. He wrote in his end-of-year evaluation that when he came to the 'Integral Psychology' class he wanted to learn why other people behaved the way they did. He soon realised that the classes were not going to give him this, as they were focusing on self-observation, but he decided to hang on, hoping that in due time the 'others' would still come in. Then as the weeks passed by, he realised that his own nature, which he

had never questioned before, was actually far more mysterious and interesting than he had ever realised, so slowly his interest in others took the back seat. But, to his big surprise, near the end of the year, he caught himself smiling when seeing other people doing certain things, saying to himself, 'Hey, I've been there. I know why they do what they do!'

[10] Still, even Sri Aurobindo leaves a place for completely ineffable states and the related yogic trance of Samadhi. He writes in *The Synthesis of Yoga* (1917/1999, p. 526):

> It is true that up to a point difficult to define or delimit almost all that Samadhi can give, can be acquired without recourse to Samadhi. But still there are certain heights of spiritual and psychic experience of which the direct as opposed to a reflecting experience can only be acquired deeply and in its fullness by means of the Yogic trance.