

MODERN SCIENCE AND THE IMMORTALITY OF THE HUMAN PERSON

— TWO TRENDS OF THOUGHT
IN CHRISTIAN ANTHROPOLOGY —

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Various protestant Theologians, like W. Pannenberg¹ for example, as well as some Catholic Theologians, reiterate in numerous writings that modern science has already demonstrated that the distinction between the spiritual soul and the body cannot be sustained. The object of this article is to examine whether, in fact, modern science has demonstrated that every doctrine of the spirituality of the soul is untenable.

Personally, I do not think that Science has demonstrated that every doctrine of the spirituality of the soul is untenable, even if many biologists and psychologists are materialists or phenomenists or monists with conceptions of varying degrees of shading (the behaviouristic conception, which tends to deny the very existence of psychic phenomena which it ignores; the epiphenomenalistic conception, which considers cognition to be an epiphenomenon of matter or a secondary symptom produced by matter; the theory of the two aspects, mental and corporal, of the same material reality; the theory of two languages, etc.).

What has been *demonstrated* is only this: that a rich and complex interaction *exists between psychic phenomena and molecular neurophysiological phenomena*. Nevertheless, it is far from being proved that an univocal correspondence exists between psychological phenomena and molecular nervous phenomena, i.e. that two different psychological phenomena always correspond to different molecular phenomena².

¹ Cfr. W. PANNENBERG, *Was ist der Mensch? Die Anthropologie der Gegenwart im Lichte der Theologie*, Wandenhoek und Ruprecht, Göttingen, 1972.

Christian anthropological conceptions

In Christian thought there have been *two* main anthropological conceptions, one Platonic-Augustinian, the other Aristotelian-Thomist.

The Aristotelian-Thomist trend maintains that the body (or rather, the prime matter) is an intrinsic component of the « I » (or person, or knowing subject). Therefore, according to such a conception, body and soul are *intrinsic components* of the person.

The Platonic-Augustinian and Cartesian doctrine³, on the other hand, maintains that the body is not an intrinsic component of the « I », but is rather an instrument of the « I ». According to this doctrine the « I » or person coincides with the soul.

This is an initial approximation of the difference between the two doctrines. However, on closer examination of the Thomist doctrine one notices that the difference between it and the Augustinian doctrine is less apparent than it appears to be initially. In fact, according to St. Thomas the subject of the sensations is constituted by the composite soul-prime matter, but the subject of the acts of the intellect and of freewill is constituted by the soul alone⁴ (as in the Augustinian conception).

The conception which appears to me to be the true one belongs to the Platonic-Augustinian and Cartesian thought trend, and may be formulated thus: « The 'I' is spiritual » or « The human person is spiritual ».

This thesis is out of fashion today, but I uphold it for the simple reason that I think that there are valid scientific, philosophical and theological arguments in its favour⁵. The upholders of Thomistic

² In fact, we are still far from knowing the precise nature of molecular neurophysiological phenomena.

³ It should be noted that St. Augustin's thought is not fully defined since, at times, he speaks as though he shared the Aristotelean conception; but, generally, his thought is more in accord with the Platonic conception.

⁴ This affirmation, however, gives rise to some criticism of St. Thomas's doctrine, since the sentient « I » is exactly the same as the thinking « I ». St. Thomas, himself, repeats several times the very same one who thinks is the one who feels. But it seems to me that there is some incoherence here.

⁵ I have already treated this argument, in various forms, in other essays. The first article was entitled: *Die Geistigkeit der menschlichen Person*, in *Theologie und Glaube*, 64 (1974), 286-304: in this article the reader will also find a discussion on the Council of Vienne. The Italian translation of this article appeared in my book *Questioni dibattute di Teologia/1*, Pont. Univ. Lateranense - Città Nuova, Roma, 1977, pp. 109-131. I discussed the biblical aspect of the present problem in the article: *La Rivelazione e l'immortalità dell'«io» umano*, in *La Civiltà Cattolica*, 1981, III, 209-224.

conception very often speak as if their conception were more beautiful and rich than the Augustinian one. It seems to me that such an idea is in no way justified.

In the terminology I shall employ, the expressions « human person », « knowing and willing human subject », « I », « human soul » will be interchangeable. The « I » coincides, in my opinion, with the soul, with the person, with the knowing subject⁶, and it is spiritual, not material.

The human, spiritual subject interacts with the body through which it understands and operates; but the body is a material substance⁷, distinct from the spiritual subject.

Man is « an incarnated spiritual person »⁸.

The arguments used by the philosophers of the Thomist trend of thought.

In substance, the argument that Thomist philosophers use to support their theory that the body is an intrinsic component of

⁶ Various Scholastic authors define the « I » as « the conscience » or « the knowledge of myself and of my world ».

No doubt, a word may be defined as one chooses. However, in current usage, the « I » is a person, a knowing subject.

Then it is inconsistent to define the « I » as « the knowledge of the « I »: the « I » is that very self that knows.

⁷ The expression « a material substance » is to be understood thus: the human body is made up of very many elementary particles which join to form atoms and molecules.

⁸ From the biblical standpoint one notices that already in the Old Testament, and even more so in the New Testament, the statements regarding the immortality of the soul are always presented as affirmations of the immortality of the « I », i.e. of the *whole person*, who on earth knows, does good or evil, rejoices and suffers. Jesus said to the good thief: « Today *you* will be with me in paradise ». This manner of speaking is not sporadic, but constant.

All this is in agreement with the thesis I support. In my opinion the only meaningful way in which one may speak of the soul is the one in which one speaks of the person.

On this topic, the affirmation of the Sacred Congregation for the Doctrine of the Faith, made in a recent document, is important: « The Church affirms the survival and the subsistence, after death, of a spiritual element, an element endowed with consciousness and volition, in such a way that the human « I » subsists, although deprived of its bodily complement in the interim. In order to indicate such an element, the Church uses the word « soul » — a word consecrated through long usage in the Holy Scriptures and by Tradition (« *Letter to all Bishops who are members of Episcopal Conferences on certain questions pertaining to eschatology* ». The official Latin text is published in AAS LXXI, no. 11, pp. 939-943). To my knowledge, this is the first time that a document drawn up by the Magisterium of the Church explicitly asserts the identity of the soul with the « I ».

the « I », is the following: « I feel myself as a body, therefore the body is a part of me (or of my « I ») ».

Sofia Vanni-Rovighi, a most cultured Thomist, presents the argument in these terms: « But it is man, himself, who is aware not only of thinking, but also of feeling (not only of thinking of feeling, but of actually feeling): *idem ipse homo est qui percipit se intelligere et sentire; sentire autem non est sine corpore* (*Summa Theol.*, q.76, art. 1). Herein lies the whole demonstration of the substantial unity of man, of the unity between soul and body. It is I, myself, who feels and understands with my intelligence; now, I feel that I am a body, I know myself to be corporal. My physical being is immediately manifested to me by my sensitive consciousness; I feel myself to be a body, therefore I should not demonstrate that I possess a body, as I should demonstrate God's existence, or something I have never seen »⁹.

A prime argument in favour of the non-materiality of the human person.

In my opinion, it is not true that « I ascertain my corporal being ».

The statement « I feel myself corporal », so often repeated as if it expressed an obvious and irrefutable experience, in my estimation is merely an equivocal statement due to various factors:

- (1) the constant union of the knowing subject with a given living body,
- (2) the overriding tendency in each one of us to imagine things (even oneself),
- (3) the fact that I have sensorial perceptions (touch, pain, etc.), which concern my body and not other human bodies.

In order to prove my thesis, I shall begin by describing the motivation which first led me to conclude « I am a spiritual, not a corporal subject ».

I arrived at this conclusion, not by direct study of the question, but by studying scientific data concerning the critical problem of knowledge, and more precisely of sensorial knowledge.

In regard to the sensorial knowledge among realistic philosophers (i.e. those who admit the existence of material bodies and

⁹ Sofia Vanni-Rovighi, *Elementi di Filosofia*, III, La Scuola, Brescia 1963, pp. 160-167.

of the whole physical world), there are two positions: the immediatistic conception and the mediatistic conception. According to the « immeditist » philosophers, man immediately grasps material object through his senses, since sensorial datum is *the object itself which appears*. Whereas, according to the « mediatist » philosophers man's senses do not immediately grasp the physical objects, since the sensorial datum is a phenomenic « quid » distinct from the physical object represented¹⁰.

I believe I am able to demonstrate that *all* my sensorial cognitions, even those regarding my body, are « mediate »¹¹.

Let us consider the optical sensation. When I look, I see not only colour structures, but immediately and without reasoning, I am led to think I see coloured bodies before me, independent of myself. This is the phenomenology of sight.

Here, then, is the problem: when a visual sensation leads me to think that there is a book, a table, etc. before me, is this sensorial datum the physical object itself? Do I grasp the physical object immediately?

It is quite likely that had I never noticed any fault in the sensations, I should have answered the preceding questions in the affirmative.

Nevertheless, for various reasons, I am obliged to give a negative answer. In fact, an affirmative answer to that problem, i.e. the

¹⁰ Here, it may be as well to make an historical parenthesis: the doctrine of the sensorial mediatism was greeted with hesitation and disapproval by ecclesiastic circles. Mons. G. Zamboni was suspended from lecturing at the Catholic University in Milan. The reason for this disgrace was the fact that the argumentation put forward by the various mediatist philosophers was, initially, truly insufficient to prove that sensorial data correspond to physical entities which really exist. We, religious, by the very fact of our apostolic concern, tend to accept a problem (which may involve the Faith) only when the solution is in sight.

¹¹ The expression « *mediate* sensorial cognition » may be misunderstood. It certainly does not mean that in ordinary sensations, we first consider a purely psychological « quid » and then, by inference we go on to recognize the external material object. No, the sensorial datum is a psychological state, which *at once*, and in a spontaneous way, without reasoning, induces us by its very nature, to think that the material object exists. That is, the sensorial datum has an intrinsic objectifying tendency (of an instinctive type).

From a critical standpoint however, one must and one can demonstrate that in general the sensations give us cognition of the existence of real, physical objects, i.e. that, sensorial data correspond to real physical objects which exist. I have treated the argument in favour of this realism in my book: *Il problema della conoscenza*, Abete, Rome 1972. Such argumentation is on the lines of that treated by J. de Vries in *Critica*, Herder, Barcelona, 1964, pp. 120-123. Cfr. also my book: *Brevi lezioni di Filosofia*, Pont. Univ. Lateranense - Città Nuova, Roma, 1983.

acceptance of the doctrine of sensorial immediatism, would be contradictory to scientific results; in other words, supposing one admits that the senses gives us immediate knowledge of existing bodies, one must likewise acknowledge some facts which are in opposition to the immediatism of sensorial knowledge. I shall briefly touch upon these facts:

In order to produce a sensation the physical object must act on the psychic subject. However, the physical object (which is then « felt ») does not act directly on the psychic subject, but by means of a long chain of intermediate material agents.

For example, consider sight: a body emits electromagnetic radiations, which cause certain bio-chemical modifications in the cells of the retina, which produce ionic waves which travel along the nerve fibres until they reach some special cells in the cerebral optical centres. Only when the excitation reaches these cerebral nervous cells, and *only then*, does the sensory datum arise in the conscious subject. From these facts, which I believe to be practically incontrovertible, follow two conclusions, which are in opposition to the immediatistic conception.

1) The only material event which might, possibly, be known immediately by the conscious subject, would be the last biochemical modification of the cerebral cells of the optical centres, because this is the event which influences the conscious subject immediately. Whereas such a bio-chemical modification in no way appears in the sensorial datum which was caused by it.

2) Sensorial immediacy implies that I may perceive an object in so much as it is physically present in my sensation. But it is not so.

The psychological sensation of the material object is delayed (and is, in fact, posterior) by a lapse of time in respect of the initial action by which the object began to cause the sensation. The electromagnetic waves take some time to travel from the object to the eye and to produce in the retina the nervous excitation (i.e. the ionic wave along the nerve fibres) and this excitation takes some time to reach the cortex cells of the brain. Therefore *I perceive an object as being present when, the object itself, might no longer be present.* It is true that generally the time lapse is very short¹², nevertheless it

¹² If, however, the objects seen are at a great distance, then the lapse of time may also be very great. The classical example is the sight of the stars: now, we see a stellar explosion which took place thousands of years ago and which today has ceased.

exists; and that is quite sufficient to demonstrate the non-immediacy of the sensations¹³. From a philosophical point of view a minimal delay demonstrates the non-immediacy just as much as a long interval would do.

Since this interval is a general fact, that occurs in *any* sensation, I think that one must conclude that no sensation grasps the material object immediately¹⁴.

This is a valid conclusion, for the same reasons, even for the sensorial perception of my body; from the receptors the stimuli travel along certain nerve fibres until they reach specific nervous centres in the cerebral cortex. Only then do the sensorial data of my body arise¹⁵.

Therefore, the sensorial datum is not the material object itself, which appears; the sensorial datum or phenomenon is a psychological « quid » distinct from the object, in so much as it may exist even when the object no longer exists¹⁶. The sensorial datum is also often termed « sensorial image »; however, one should remember that this psychological « image » has only a vague and indirect analogy to a physical image (for example, a photograph). The sensorial datum is a psychological « quid » and, as such, it is an enti-

¹³ In order to demonstrate this fact clearly, let us suppose that electromagnetic waves, which travel at a speed of 300.000 Kms a second, were to travel at the speed of a metre an hour instead. This fact would not alter anything in my sense faculty. All the same it is clear that it would be impossible to speak of immediacy in my sensations, given that, generally, the object would no longer be present at the instant of perception. In this supposition, the non-immediacy would be much more apparent than it is now.

¹⁴ Therefore, by accepting immediatism we encounter a contradiction because, initially one admits that the sensorial cognitions are immediate, then, by studying the physiological phenomena connected with the sensations (which come about through use of the faculties of the senses themselves) one is forced to admit that all the sensorial cognitions are not immediate.

¹⁵ It is interesting to note, by the way, the fact that the whole of our brain is not felt by us. This is shown by common experience, as well as by anatomical and physiological data: in fact there are no sensorial receptors in the brain. Even when we feel a headache to come from the centre of the cranium, this is only a projection of the subject: the stimulus which causes it comes not from the brain but from the meninges enveloping the brain. The brain itself does not ache.

¹⁶ This affirmation is in partial accord with the thought of philosophers and scientists and, in particular of psychologists, of the Humean phenomistic tendency. In fact, these scholars, who deny the existence of material bodies, and who reject the identification of our sensorial data with the body, also reject the assertion « I am corporal » or « I perceive myself corporal ».

In my opinion, this is the valid aspect of phenomenism, its defect lies in the negation of the substantiality of the « I » and the negation of the existence of bodies.

rely « sui generis » reality; in order to understand what it really is, the only valid method is to consider it for itself and not in comparison with other realities.

In conclusion, *in no sensation whatsoever is the sensorial datum the physical object referred to*: the physical object is never perceived immediately¹⁷.

This general and fundamental fact makes the affirmation that « I have immediate cognition of myself as corporal » untenable because I have immediate cognition of *no body whatsoever*¹⁸.

What I do have immediate cognition of, is my « I » and my psychical world (my sensorial perceptions, my capricious imagination, my thoughts, my voluntary actions, my emotions, etc.) *These realities are non-material*. The reason for this affirmation is provided by direct observation: by examining these realities I perceive that they are different from those realities I call « material »¹⁹. No one can see or touch me, my dreams, my sensations, my thoughts, my voluntary actions, my emotions.

My cognitions, my volitions, my emotions not only are not material substances, such as a proton or an electron; they are not even actions of one material substance on another, such as, by contrast, are the actions of electro-magnetic and gravitational attraction or repulsion. This statement, too, is the result of direct observation: my cognitions are not what I mean when I speak of « actions of one material substance on another ».

By affirming the non-material character of my cognitions, desires, emotions, I do not, in any way, intend to deny the correlated occurrence in the human body, and in particular in the nervous system, of specific physical and chemical phenomena, such as atomic and molecular modifications, flux of ions and electrons, etc..

The occurrence of these biochemical phenomena is an unde-

¹⁷ Note, that while up to two centuries ago, the philosophers who sustained the psychological nature of the sensorial data based their argumentation primarily on error, today it is based on the *normal* physiology of the sense organs, i.e. on what happens not only when we commit an error, but always.

¹⁸ The mediacy of sensorial cognition is not in itself essential to validate my thesis, since, even were my sensations immediate, my body would still be only an object (and a medium) for my sensations, it would not be the « I ». Nevertheless, the fact that my sensations are not immediate and, therefore, my sensorial data are not the bodies themselves, makes increasingly evident the insustainability of the affirmation « I have immediate cognition of myself as a body », since I have immediate cognition of no body whatsoever.

¹⁹ Just as, when considering a colour sensation and a sound sensation, one realizes that they are different sensations.

niable fact even if, at present, we know very little about them. They indicate that the nervous system must have a real function of cooperation with the psychic activities of the human subject²⁰. What I wish to affirm is that cognition, and volition, and emotion *are not to be identified* with the correlated biochemical processes. My cognition of a certain object and its correlated biochemical process, which takes place in my brain, are distinct and different realities: a cerebral molecular modification is only *a molecular modification*, and is not my cognition of the object.

Other arguments in favour of the non-materiality of the human person.

2) The spiritual subject does not interact directly with all the cells of the organism, but only with certain groups of cerebral nervous cells²¹. If one were to admit the direct interaction of the « I » with all the cells of the organism, it would not explain the function of the nervous system, nor explain the necessity of the function of the conduction of the influx along the peripheral nerve fibres to the nervous centres and vice versa. In fact, the incision of the nerve fibres prevents the « I » from receiving any sensation from the corresponding areas and prevents it from stimulating muscular contraction.

This fact does not agree with those dualistic doctrines (like, for example, the Thomist) according to which the soul is directly united to *all* the parts of the body; nor does it agree with the monistic doctrines according to which man is a reality with two inseparable aspects, the one corporal and the other psychical.

3) This argument and the two following have also the advantage

²⁰ Contrary to Plato's conception, the Church and almost all Christian thinkers have consistently refused to consider the human body as imprisoning the spirit, since the spirit would have been confined in the body in consequence of sin. The body has a positive, instrumental role in the exercise of the psychic faculties (at least of all or almost all those that we explicate during our life on earth) and this fact explains the significance of the final resurrection when every human subject will regain a body.

²¹ This is the reason why, in some States, legislation permits the removal of the heart, kidneys and other organs once the cerebral cells are dead, (this is justifiably permitted when the flat electro-encephalogramme persists for a certain time, say for 12 hours), even if the heart is still beating and the majority of the body cells are alive.

of helping the reader to understand more clearly what I mean when I speak of my « I ».

My body is continually changing, nevertheless, the « I » as subject, remains unchanged, it does not change even partially. Therefore, the « I » is not the body.

It is a fact of common observation that the body changes during its life, since the body of the same subject is different when it is a child from when it is adult or old. But modern science has shown change in the body to be much deeper and continuous. The living body is in continuous metabolism, since it replaces the molecules of which it is made up (replacing old molecules by new ones). On the contrary, I perceive my « I » as being permanent.

Similarly, when I speak to an old friend, I am not concerned whether the molecules which make-up his body at present are those of which he was made up ten years ago or not; I think I am speaking to that very same « he »²², the same individual to whom I spoke ten years ago. This means that, when I think of « him », I do not think of his body.

4) The removal of a limb does not mutilate the « I ». If a hand or a leg is amputated, my body is mutilated, but from another aspect, the « I », or the subject, which has cognition and volition, remains the same.

5) I perceive my « I » as possessing a unity that matter cannot have: the « I », as subject, has no parts (even if I have various operative faculties).

My professor of Cosmology at the Gregorian University, Fr. P. Hoenen, a well known philosopher, in order to attribute to the body the unity of the « I », maintained that the human body (and every living organism in general) is a physical « continuum », that means that he denied that the body is constituted of particles at a distance from each other and in relative motion. This is contrary to all modern biochemistry and biophysics: the living body is made up, like inorganic bodies, of particles which are spaced between themselves and in movement.

²² And I have justifiable reasons for thinking so. The main reason is constituted by the behaviour of the man before me; e.g. he speaks as one who knows what my friend knew and what another person in all probability would not know; more generally his behaviour agrees well with the hypothesis that he be my friend; behaviour which would be extremely improbable in the opposite hypothesis.

However, even if a human body were a physical continuum, it would never have the indivisible unity of the « I ». In fact, a spacial continuum has « partes extra partes », and a part is not another; whereas the « I », as a subject, does not have distinct parts, and is not divisible into parts²³.

6) The « I » has cognitions, emotions, volitions. All these operations are non-material. Therefore, the « I » which is the subject, is non-material; in fact, the cause must be proportionate to the effect.

Even my sensation at the lowest level, such as a sensation of pain, is not material²⁴: no one can see it or touch it (as I cannot see or touch the sensations of other people)²⁵.

I know by direct cognition that it is a reality quite different from the one we ordinarily mean by « matter », just as I know that red is not green and that a colour is not a sound. That the sensation of pain is neither a repulsion nor a physical attraction between two bodies, this, too, is a direct cognition. Also those cognitions which present an image, like my fantastic imagination or my dreams,

²³ An argument that may be brought against the unity of the « I » is the case of *dual* personality. It is a complex question which cannot be treated here in full. It may be noted that many psychologists and psychiatrists deny the existence of true cases of duality of the « I ». Even those psychologists who maintain duality, really refer to a dual « personality » in the same subject. By « personality » they mean the manner of thought, the temperamental characteristics, the affective tendencies towards certain people, places or things. Actually, there have been asserted cases in which a neurotic has two « personalities » (in this context) either alternatively or as well, in some measure, simultaneously; but, in these cases it is always the *same* subject who has two « personalities ». The state of anguish from which these crank, unstable people suffer is due precisely to the fact that the same subject is conscious of his two « personalities ».

However, were this objection valid, it would be contrary not only to my thesis, but contrary to all the conceptions of Christian philosophers and theologians, all of whom maintain the unity of the « I ».

²⁴ Note that I am speaking of *human* pain sensations. The question of animal sensations is more difficult for us to resolve: however, it seems to me that animal sensations (and all cognitions) must be considered to be non-material. I think too that animal subjects are non-material, even if their ontological levels are different and are inferior to that of human subjects. In addition, I think that pain suffered by animals poses a real theological problem, which cannot be solved merely by qualifying animal pain as a « physical fact ». Cfr. my books *Questioni dibattute di Teologia 1*, Pont. Univ. Lateranense - Città Nuova, Roma, 1977, pp. 69-70, and *I massimi problemi dell'essere*, Ed. Paoline, Roma, 1977, pp. 439-446.

²⁵ « No one can see or touch it » is a simply introductory phrase to explain what I mean. The more precise form of speech is found in the following sentence in the text.

are not material: no one can see or touch those images of mine. Sometimes it is said that cognitions with images are intrinsically affected by materiality, since they are intrinsically affected by spaciality. I do not think that these observations are valid. It is true that the images are always images of spacial realities, but the spaciality of my imagination is in itself a purely *subjective or phenomenical* spaciality, which *does not occupy a physical space*.

Besides, in general, my cognition cannot be reduced to images, neither when I have cognition of material realities, nor (and even less) when I have cognition of non-material realities (in themselves unimaginable).

First, let us consider some examples of cognition of material realities.

I am unable to imagine ten equal columnnes, but I *know* what they are. This « knowledge » is not an image.

I am unable to imagine simultaneously the various fases of a process which takes place successively in time. Even though, in the same instant, I *know* what that process is; I *know*, for example, that in one day I went to the office twice. This « knowledge » is not an image.

I *know* that, besides the objects I imagine, other objects do or can exist, whether similar or dissimilar from them, in potentially infinite number, and that each one of them is well defined in itself. This « knowledge », with its precision and its infinity, cannot be reduced to images: the images are imprecise and finite in number (and even in a very small number). In addition, I just *know* that objects may exist which are *other* in respect of those imagined.

Let us now consider some examples of cognition of non-material realities. I *know* the joy caused by a fine performance, the pain occasioned by the loss of my father, the expectation of an exam result, my will to do a certain action, etc.; this « knowledge », even when accompanied by images, is not those images, since the known realities are not « imaginable ».

7) I perceive myself as a substantial and non-material subject (not extended in space, intangible, invisible). And I think of other human people in the same way.

Various philosophers, Sensitists in particular, deny the substantiality of the « I » and affirm that: « *I* am the ensemble of my sensations », « *I* am the ensemble of my phsycological states ».

But, I am constantly aware that the sensistic scheme does not express myself. I perceive myself to be the subject of my sensa-

tions. Despite the negation by Sensitists, I think of the « I » as a substantial subject. And this is a datum of direct cognition. I have an immediate auto-perception of myself; I perceive myself to be a subject which feels something, imagines something, thinks something, wants something; I perceive myself to be a subject independent of its psychological states (in such a way that I can remain unchanged despite the variation of my sensations, of my thoughts, of my voluntary actions; and I should remain the same even had I not had those psychological states or had I had others).

Nevertheless, the self-awareness of myself, which is clear in the phase of ordinary or direct cognition may fade in the phase of reflexive cognition, i.e. when I seek to meditate carefully on myself and I seek to examine my « I » more attentively. I believe that that is due to the strong tendency we have to imagine things.

I am not something which can be sensed or imagined. If I try to imagine myself, I lose myself, because I seek something I am not. Nevertheless, even in this state of loss, I remain to myself an *ineliminable* reality. This « inability to find myself » lasts so long as I do not accept the fact that I am not an imaginable reality, but that I am really my « I »²⁶.

No doubt, many readers will be reluctant to accept my affirmation of the immediate awareness of the « I » as a subject. I believe I can understand their hesitation, because, when I first began to meditate on this question, I, too, was very hesitant.

Perhaps more readers will be willing to admit this: that the scheme of « an ensemble of psychological states » is not sufficient to express me and each one of them; that we are something more; that, when they think and speak of a person whomsoever, for example of me, the author of this book, they think and speak of « someone » and not of « an ensemble of psychological states ». Recognition of the insufficiency of the sensitistic scheme is already a big step²⁷.

In each of us a strange and intimate antagonism exists. On the one hand we have a strong tendency to imagine things (especially

²⁶ By this I do not wish to say I have complete knowledge of myself; on the contrary, I have a very incomplete knowledge. The mysteriousness of the « I » is truly great.

²⁷ An internal criticism of the sensitistic doctrine is the following. The Sensitists state that « I am the ensemble of *my* psychological states ». Now, what does this « my » signify? What difference does it make that a particular psychological state be « mine » and not « another's »? « My » means « of *me* », of the « I ».

visually), which leads us to wish to « give » a shape to every knowing subject. This tendency to imagine things, which has a strong influence especially in the phase of reflex cognition, brings us somehow towards materialism.

On the other hand, we have, especially in the phase of direct cognition, a *clear conviction* (due to self-perception) such as: I am a subject who knows and wishes, who remains the same despite the fluctuation of my cognitions and volitions and who would remain unchanged even were I to have cognitions and volitions different from those I had. We also have the precise conviction that we remain the same even though the body changes. This is a *precise spiritualistic conviction*, which we *all* have, even those who, in a phase of reflex knowledge, affirm pure materialism. It has never happened to me (and I believe it has never happened to the reader) to meet a friend, a confirmed materialist, who has expressed the following: « Excuse me, you appear to me to be an old friend. Could you tell me whether the atoms which make up your body are the same as those which made up the body of my friend twenty years ago? Because, if so, you are my old friend, if not, please, excuse my confusion ».

By this example I wish to point out that from a certain (valid) aspect, we are *all*, without a shadow of a doubt, *clearly* and *categorically spiritualists*. It is only in the phase of reflex knowledge that one may become a materialist, when one absolutely wants to « grasp » himself as something tangible, imaginable.

It is also significant the fact that the shape we wish to « affix » to every knowing subject is *any* shape. I say « any » because the actual shape and its constitution does not really matter to us: the Jews attributed to the people of the Sheol a « slender » body of human shape and the Romans did the same for the people in Hades; the mediums attribute to the defunct, whom they claim to see, bodies of the most varied types: such as a spherical cloud, or a ring of cloud, etc.; the supporters of metempsychosis have no difficulty soever in thinking of the same person with a human, bovine, vulturine or serpentine shape.

At the end of these argumentations I will add a confirmation of my thesis: if an immaterial subject could feel, know, and act only with the mediation of a body, then it seems to me that he would have precisely an experience of the same kind as mine.

Interaction between the human subject and the body.

In fact, the spiritual subject and the body exert a complex reciprocal influence. The nature of this influence is totally unknown to us.

As I have said already, the spiritual subject does not act directly on all the body cells but only on some superior nervous cells which by means of their action influence all the others.

However, one must not think of the nervous centres only as receiving stations for sensitive excitations and as emission stations for motory excitations. From the results of many experiments, especially from the effects of brain damage, we must deduce that the nervous cells exercise a profound co-operation on all the psychic activities of the human subject, whether cognitive or affective. This co-operation exists also in the superior activities of intelligent creativity, but presumably it is more marked in all those complex phenomena of habitual association which are so frequent in our thought; especially regarding the last mentioned type of co-operation, cybernetics can provide excellent models.

The act of free will must provoke in the molecules of some superior nervous cells a material event, which, without its free influence would not come about. The influence of the psyche must consist in the modification of some biochemical cellular reactions by provocation, prevention, acceleration or deceleration.

This influence poses various scientific problems, also regarding the verification of eventual exceptions to the I and II laws of thermodynamics. Recently, among others, the following scholars have studied these questions: J.C. Maxwell, E. von Hartmann, H. Driesch, A.J. Lotka²⁸.

Damage (vegetative or somatic death) to those higher nervous cells with which the psyche is in direct inter-action, determines the psycho-somatic death of the individual (i.e. the cessation of the psyche's influence on the body).

It is justifiable to think that the human subject needs, because of its intrinsic nature, an organic body to be able to carry out its natural activities of cognition, emotion, volition.

I have said that the nature of the inter-action between the spiritual subject and the body is a profound mystery. This is not to be

²⁸ I have touched upon these questions in my book, *Theories on the Nature of Life*, Philosophical Library, New York, 1969, pp. 293-294.

wondered at because all the fundamental natural phenomena are a mystery to us.

For example, even the action of attraction or repulsion between two bodies is beyond our comprehension. How does a magnet attract a piece of iron? This action, which is a datum of experimental observation, is a complete mystery. Attraction is so mysterious that, if, before any experience, one were asked « Is it possible for one body to attract another? », most probably we would reply in the negative.

The problem and mystery of the influx between the soul and the body exists in all doctrines which admit, in some way, a distinction between soul and body²⁹.

Various observations

It is often said that a valid anthropology must affirm the unity of man.

This assertion is true in a certain sense, i.e. if by « man » one means the « I ». It seems to me that what must be affirmed, since it is a datum of intimate experience, is the *unity of the « I »* i.e. the unity of the knowing and free willed person.

To the affirmation of the indiscindable unity of the « I » is connected the affirmation of the *permanent identity* of the « I » in terrestrial life, in spite of the continuous metabolism of the body. The proof of the immortality of the soul and of the ultra-terrestrial sanction supposes, besides, the identity of the person even in the ultra-terrestrial state without the body³⁰, in such a way that that « I » which on earth performed good or evil, that very same « I » (or person), is the subject which merits ultra-terrestrial joy or pain.

²⁹ Therefore, it is rather surprising to read the writings of certain Thomists in which it would seem that, according to the authors, the problem of that influx were quite clear if one supposes the doctrine of prime matter and of substantial form. On the contrary, in the Thomist doctrine the problems is still more difficult, since it admits a closer union. It is not only a question of « Can a spiritual reality influence a material reality and vice versa? » but of « Can a spiritual reality be the « act » of a non-spiritual reality? ». The solution does not appear to me to be so clear.

³⁰ At least in the first phase, from terrestrial death to the resurrection of the body. For this phase, some Catholic theologians, wishing to maintain that the soul cannot exist, even for a moment, without the body, have proposed various hypotheses. Cfr. my article mentioned above, in *Civiltà Cattolica*.

The unity and the permanent identity of the human person is in perfect accord with the thesis I maintain.

On the other hand, I do not think that the unity and the permanent identity of the « I » agrees well with the Thomist doctrine, for the following two reasons in particular, which I have already treated above:

1) According to the Thomist doctrine the « I » is not an indivisible unit, but is composite. And, in addition, it is a composite in which one component (matter) alters continuously. Now, if a component alters, then the composite cannot remain unchanged.

2) According to the Thomist doctrine the thinking subject is constituted by the soul alone, whereas the subject which feels is the composite constituted by soul and body.

This is in opposition to our conscious experience whereby the « I » which feels is the same as the one who thinks.

The Thomist conception according to which the human soul and the body (or prime matter) unite to form a single substance, an *unum per se*, tends to alter the characteristics of both soul and body; in fact, according to the circumstances, it tends to attribute to the intelligent subject certain characteristics of the body and to the body certain characteristics of the thinking subject.

The same difficulties can be found in some modern organicistic conceptions (with a strong monistic tendency)³¹, such as those maintained by J.S. Haldane, B. Dürken, E.S. Russell, for example. In the writings of these authors one notices that their conception leads them to attribute to the spirit characteristics proper to matter, and to matter characteristics proper to the spirit. Thus, for example, there is the tendency to attribute to the organism the unity of the psychological « I » or to attribute to the « I » the non-permanence of the body in continual metabolism.

Consequently, both the knowing « I » and the matter become an incomprehensible and contradictory mystery, without hope of solution. This is the source of certain affirmations of the assiomaticity of the living organism. Such difficulties are clearer in the Thomistic doctrine because it is more developed and therefore pushes the consequences of its initial affirmation further. E.g. the *unum per se* affirmation leads the Thomists to attribute to the human body the indiscindible unity of the « I ». Therefore, many of them,

³¹ That is, a tendency to deny, at any level, a distinction between spirit and matter.

in an effort to be coherent, affirm that the human body is a physical « continuum »³². This put them in opposition to all modern biochemical science, according to which the human body is made up of particles (grouped into atoms and into molecules) *spaced between themselves and in continuous movement*.

Various philosophers and theologians³³ have sustained an internal composition of the soul. In my opinion no valid reasons exist to support such a composition; instead there is a reason for the simplicity of the soul (i.e. in support of the negation of any substantial composition): this reason is the auto-experience of the unity of the « I ».

It will be noted that the conception I uphold is not in agreement with the affirmations of the majority of modern experimental psychologists. It is equally true, however, that these affirmations do not agree with the doctrine of the spirituality of the soul in general, and even less with the Thomistic doctrine of a spiritual soul which is the unique subject of the intelligent and volitional operations.

Besides, although my conception is in marked contrast to the thought of psychologists of a typically materialistic trend, on the contrary it is in partial accord with the thought of those psychologists (*numerically much superior*) who adhere to the phenomenistic Humean trend³⁴. These latter, in fact, reject the identification of our sensorial data with the body and therefore refute the affirmation « I feel myself a body ».

In my opinion, this last is the valid aspect of phenomenism (and of idealism) and is a contribution which will endure; just as the valid aspect of materialism is the affirmation of the existence of bodies.

³² Anyway, even were the human body a physical continuum, in my opinion, it would never possess the unity of the « I ».

³³ E.g. the great Franciscan Theologians.

³⁴ Thus reaching the point of denying the existence of the physical body (in the literal meaning of the term).

The natural immortality of the human person

From the spirituality of the human person, it follows that the human person has at least the *radical possibility* to exist without a body, since it is a reality distinct and different from the body. Somatic death, i.e. the body's decay (or of the cerebral cells only), does not necessarily coincide with the cessation of the spiritual subject, precisely because the body is not the spiritual subject.

In favour of the spiritual subject's possibility to endure even after the body's decay, there is the additional fact that, even if the human subject in this life was always united to a body, nevertheless this body changed continually, it was not always the same.

Once it is proved that the human subject possesses the *radical possibility to be immortal*, its *concrete immortality* remains to be proved.

In fact, it might be said that the spiritual subject, at the time of somatic death, is annihilated, either directly by Divine will or, perhaps, by the action of natural forces (i.e. natural laws).

Nonetheless, there are positive reasons, based radically on Divine Justice and Divine Love, which exclude annihilation and cause admittance of a Divine plan in mankind's regard implying the permanence of the human subject even after somatic death.