

*The inexistent mind*  
by Antonello Sciacchitano

*Foreword*

Let me begin by contextualizing Elvio Fachinelli's last intellectual feat, suggesting an interpretative key. With *The Ecstatic Mind* (*La mente estatica*, Adelphi, Milan 1989) Elvio sent out a message. He wanted to point out to us, his descendants and friends, a possible new line of research in psychoanalysis. Indeed, the book testifies the attempt, which was only partially successful but not for this reason was it any less fertile, to cast aside Freudian schematism. In particular, the woeful Italian version of this schematism: by this I mean the official – pedantic and dogmatic – one that Cesare Musatti foisted first on the translators of the *Psychological Works of Sigmund Freud* and then on the consumers of psychoanalysis. The fact is, we have to appreciate this attempt by Fachinelli, excellent translator of Freud's *Traumdeutung*, to break free from the paradigm dictated by the IPA as psychoanalytic orthodoxy and whose yardstick remains Freud's *Standard Edition*, edited by James Strachey and reproduced in Italian by Musatti who translated Freud from the English instead of the German.

In short, *The Ecstatic Mind* is not an apology but a study. Its aim is not to establish what Freud really said, differentiating it from the criticisms of the heterodoxies; instead, it attempts to pave the way for whatever fresh can be said, taking Freud as the starting point, irrespective of orthodoxy and heterodoxy. I think Elvio's approach is both extremely interesting and highly relevant. For sure, in this way Elvio recanted Freudian schematism but not to the point of refuting Freud *tout court*, as was the fashion in neo-Freudian circles. Elvio had no intention of disowning Freud; all he wanted to do was free himself from the constraints of Freudian thought which Freud himself found a tight fit. As Foucault cautioned Derrida, "Freud must be given his due". Fachinelli was fair to Freud in that he helped him overcome certain dilemmas prompted by the 19<sup>th</sup> century positivist mentality.

Not to polemicize but to transcend his failures we have to admit that, as a scientist, Freud was a loser and I don't say this in the spirit of Popper and Grünbaum. Good gracious! Freud's failure is of course no trifling matter; it impacts nothing less than psychoanalysis itself. But, in Freud's hands the attempt to endow the invention of psychoanalysis with scientific credibility was a fiasco. Quite simply, we have to accept that Freud was unable to free himself from the positivist theory of science of that time. Granted that psychoanalysis is scientific, it is certainly not positivist. This borders on the downright banal. Indeed, no science, from physics to biology, is any longer what positivism demanded: objective, quantitative and determinist. In the case of psychoanalysis, a science had to be invented which embraced the subjective dimension of scientific practice brought to the fore by the discovery of the unconscious. Positivist epistemology, devoted as it was to safeguarding the objective and quantitative aspects of scientific discourse, was unable to change into the subjective. In turn, the psychoanalytic society founded by Freud was unable to change into the epistemic. To save the Freudian *depositum fidei*, as well as the honourableness of the psychoanalyst's profession, it chose to safeguard orthodoxy and preserve the past rather than look towards the future, unlike Fachinelli.

I say this again without wanting to be polemical. Freud, unquestionably the inventor of psychoanalysis, was not the scientist that psychoanalysis needed. A paradigmatic example is exemplary. It is 1903 and Freud is writing his *Three essays on the theory of sexuality* when, with much hue and cry, Mendel's articles on the segregation of genetic factors in hybrids were brought to light. Freud doesn't even seem to have registered this

epoch-making event. Mendel is never mentioned in the 7000 pages of the *Gesammelte Werke* while the name Weismann, which no-one now remembers, is encountered over and over again. To call this a lack of scientific sensitivity would be a euphemism. In short, Freud was a great novelist. His great sociological works, *Totem and Taboo* and *The Man Moses* are unsurpassable novels on the function of the father in western civilization and will undoubtedly outlive his *Metapsychology* which rather clumsily tries to codify his scientific pretensions. Yet Freud's failure leaves room for others. Fachinelli was one of the few in Italy to measure himself against the "infinite task" of scientific psychoanalysis and I follow directly in his footsteps, having learnt how to walk from him.

I tell my modest truth without hiding behind a mask. For me, Freud's blunders are pre-scientific. Expressed in these terms this may seem to be a final and unappealable sentence but the knotty Freudian problem still has to be faced. Freud's only answer to the quantitative and determinist, positivist and objectivist paradigm was to regress to pre-Galilean science; that is, to Aristotle's physics which he had studied as a young man alongside Edmund Husserl at Franz Brentano's school.<sup>1</sup> Freudian metapsychology is a variant of the naive physics of the world of life. There is a motion, the drive. It's like that of an arrow an archer directs at the target. It has a source where the drive begins – the erogenous zone – and a target where the motion stops and rests – sexual satisfaction.<sup>2</sup> The engine of this motion, its efficient cause, is the constant force of the drive whose goal is satisfaction. The paradigm is ancient and excessively anthropomorphous: it is the paradigm of intentionality and teleology, now obsolete in modern science. There is no teleology in modern science, in quantum physics or in Darwinism. The final causes reign in the religious discourse where they are the vector of transcendent ontology. Nothing could be less scientific or less pertinent to this discourse.

Can Freud be bettered (while quite clearly not renouncing his discovery of the unconscious)? I believe that with his *Ecstatic Mind* Fachinelli succeeded in the dual enterprise of crossing unscathed the metapsychological minefield planted by Freud to defend the analyst's mind – Fachinelli is not the first or the only person to realize this – and of preserving the essence of Freudism. No less Freudian than Freud, Fachinelli indicated a direction in which to take research. He opened up psychoanalysis to a speculative dimension in which I would like to have my say. I say this as a friend. I think I have realized, more through conversations with Elvio than from his writings, just how important it is to go beyond Freud without betraying him. It is obviously not up to me to say if I have managed in this intent or not but it *is* up to me to point out that there is an urgent need to pick up again and continue Fachinelli's unfinished work. In times of cultural flattening and the alleged eclipse of ideologies, the messages of Marx or Freud risk vanishing into thin air if we don't snatch them back, wiping off the grime that has gathered on them over many years of incorrect use.

### *The imaginary existence of the mind*

Having made these premises I will now turn to the question at hand, the existence of the mind (a question which is all the vogue in cognitivist circles), starting with an

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<sup>1</sup> The affinities between phenomenology and psychoanalysis, in particular in would-be Freudians like Jacques Lacan, are still to be explored.

<sup>2</sup> The Lacanian variant of this metapsychology is no less Aristotelian. Lacan substitutes Freud's linear – sublunar – motion with the circular – celestial – motion of the drive that is satisfied within itself in a periodic toing and froing.

anecdote. The story has been going on for 25 years. Since the early 1980s I have been asking my friend Pier Aldo Rovatti, director of *aut aut*, to devote an issue of his magazine to "mind and body" and I insisted because I think it has philosophical value. But the philosopher hesitates. Why? Intrigued, I insist. The philosopher stirs but is not moved and invites me to present a "frame", as we say in our jargon, outlining the topic. I accept and the following month I take my frame along to his office. During the discussion that follows I begin to understand. I had unwittingly built a cognitivist frame. The result: the issue of *aut aut* on mind and body did not come out and never will. Paradoxically, in its place a number came out on the body.<sup>3</sup>

And the mind? Forgotten? What is the moral of this story that lasted so long? Being of average intelligence, it only took me twenty-five years to realize a truth which was already obvious to a more guileless soul than mine. The mind is just an anthropological illusion. Using a term I learnt in the histology laboratory, I would say that the mind – the psyche, psychic apparatus, soul, intellect etc. – are all *artefacts* of anthropological techniques. They don't exist in reality but are the necessary effect of the technique we use to cope with reality. They are the consequence of our ways of fixing and colouring human reality – soul included – just as in histology the tissues are fixed in formalin and coloured with hematoxylin and eosin to highlight the structures. It is the structures that count, not the colours with which they are stained.<sup>4</sup>

So, it is the anthropologist who needs to be under an illusion in order to work. He firstly has to believe that a world exists out there and, secondly, that a mind exists in here which knows how to move in that outer world. I don't question the content of the illusion because it exists and is, fundamentally, the topological content of *inside* and *outside*. What I question is the form. In a certain sense the illusion is indispensable. But so we have to say that it really is an illusion and justify why it is necessary. What I cannot uncritically accept is the supremacy acquired – in cognitivism for example – by the mentalistic illusion; that is, the illusion of the boy within the man: the Wagnerian and alchemical *homunculus*. Descartes was just as critical as me of this way of perceiving the illusion of the mind. Halfway through his final metaphysical meditation, the *Sixth*, Descartes says that the relationship between mind and body is very close, one of union and blending. In topologic terms, retrieving the term used by Descartes, I would say that the relationship between mind and body is one of *adhesion*. It is certainly not a cybernetic relationship. It is not the relationship between the helmsman and his ship. *Me non tantum adesse meo corpori ut nauta adest navigio*. Sensorial information does not reach the internal monitor of the *homunculus* as an extraneous entity to the mind from the peripheral areas of the body.<sup>5</sup> Perceptions are already intellectual, they are provided full of theory, as Thomas Kuhn and Gaston Bachelard would say, even if they are muddled or less well-known than ideas or intellectual paradigms (again in Kuhn's sense). Epistemically, or better still, in Spinozian terms, perceptions are "false" because they are not as clear and distinct as ideas, the only ones

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<sup>3</sup> Issue 330 of July 2006.

<sup>4</sup> I still remember how the anatomy professor reprimanded his young assistants when they made recourse in an obviously infantile way to "colours" to describe a histological preparation.

<sup>5</sup> Certain anatomist circles which distinguish the central nervous system from the peripheral one confirms this *artefact*. The recent discovery by Rizzolatti's research team of the mirror neurons, neither sensorial nor motory but sensory-motor in that they are activated when they sense the movement of the other is manipulated by philosophers – who call them neurophenomenologic – in a certain sense ... homuncular.

which are “true”.<sup>6</sup> But *false* should not be seen as the antithesis of *true*. Perceptions, sentiments and ideas lie along an epistemic *continuum*, from the less well-known to the better-known where the mind-body alternative is positioned. The clear dualism between the two *res* was invented by professors of philosophy.

Using the Cartesian metaphor, if we are a ship, we are one without a pilot. However, to get our bearings we need to delude ourselves that we have a pilot. In practice, and fortunately for us, things happen “as if” there was a pilot. Without the illusion of the mind we wouldn’t know how to move in society. The mind, however imaginary, is useful. We need it to think, just like Dumbo the elephant needed his magic feather to fly. We couldn’t take moral or political decisions without the mind. This justifies the need for the mental illusion. The position is Freudian. In *The Future of an Illusion*, after a long discourse on the illusionary nature of religion, Freud acknowledges that the most precious things for man, the institutions of civilization, just like those of sexuality and eroticism, are illusions and should be treated as such but not destroyed. We couldn’t live without them. We cannot entertain the illusion of ridding ourselves of civilized illusions. The room in the offices of the Provincial Authorities I am speaking in is sustained by a public illusion, the illusion that it is possible to take part in politics. We have to be extremely prudent when dealing with illusions, our mine of common sense: we should neither be overly inclined to conservatism nor overly inclined to radical change.

In other words, the illusion demands that we know how to deal with it. On one hand we have to understand that the illusion is inevitable and, on the other, we have to be able to play with the need for the illusion, in a certain sense passing through it, as in analysis we pass through the primal fantasies, a structural condition of subjectivity. One of these illusions – as the philosopher taught me without actually teaching me, like Socrates – is the mind. How should we deal with it? Firstly I have to demonstrate that it is an illusion and then undertake the task of describing how it can be used to its best. Without any doubt an illusion, but delivered with instructions.

### *The illusion of the mind*

My reasoning begins with Descartes. I choose Descartes not because he is more meritorious than other epistemic philosophers – from Bruno to Wittgenstein via Spinoza and Leibniz – but because he is conceptually simpler than many others and, I would say, the most instructive albeit with some theological slip ups which I will point out in due time. Descartes presents the condition of modernity in an almost paradigmatic way. However, I should point out that I will present Descartes’ *performance* in a rather unconventional way, stripping him of the theological mask with which he disguised his argumentation – *larvatus prode* – a little out of caution and a little to allow his contemporaries to digest the new ideas he proposed. Indeed, Descartes marks the epochal rupture. It was with him that the distinction between thinking and thought disintegrated. Suspending the millenary principle of truth as an adaptation of the mind to the thing, or of the subject to the object, Descartes heralds in modern times. In a *destruens* manner he shakes *omoiosis*, the pillar of classical ontological thought where being is unconditioned and thought is true only if adapted to it. In a *construens* manner Descartes inaugurated a new ontological discourse. Now, being is conditioned by

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<sup>6</sup> See Spinoza, *Ethics*, II Part. *There is nothing positive in ideas so they are called false* (Proposition 33). *Falsity consists in the privation of knowledge that regards inadequate; that is mutilated and confused ideas* – thus the majority of affections and passions which Spinoza considers the privileged place of the false. (Proposition 35).

knowing and speaking of adaptation no longer has any sense. What new principle of truth counts in this ontology, which we could call rather weak? Following the process of systematic doubt, Descartes reorganized epistemology in a highly original way. He assigns truth to God – concluding from St. Paul’s *Epistle to Titus* that God is not a deceiver – and knowledge to man. In a certain sense he removes truth, assigning it the seminal function of what would then be, in the Freudian unconscious, primal repression, and entrusts to man the task of processing knowledge in terms of temporary and partial certainty. Kant’s *sapere aude!* would never have been conceived without Descartes.

But let me get to the point. Setting aside Cartesian rhetoric, littered with hyperboles and malignant spirits, what the modern subject of science generates is doubt, fertile doubt, not the sceptical and sterile doubt of the Pyrrhoneans which culminates with the impossibility of knowledge. The fertility of Cartesian doubt lies in its capacity to generate a new subject. The subject of science. It is structurally different from the ancient subject of knowledge which is able to know thought through identity with the thinking. The well-known but rarely taken seriously formula and identity card of the subject of science is: *cogito*, that is, *dubito*, *ergo sum*. The *sum*, which is no longer a primordial datum but depends on the *cogito*, “contains” – but it would be better to say “presents” – that particular subject which will give life to the epistemic activity of modernity called science. It is a new activity. In ancient times science did not exist; at the most, knowledge existed. Indeed, identity between thinking being and thought does not generate science but knowledge. In German the distinction between the two is clearer than in Italian where the rhyme between science (*scienza*) and knowledge (*conoscenza*) can muddy the waters.<sup>7</sup> In German knowledge is *Erkenntnis*, clearly different from *Wissenschaft*, science. The first is the fruit of homologation, which develops into indisputable recognition (*erkennen*) of the object according to the principles set forth in the encyclopaedia of the time. The second is the effect of doubt, pure practice of a knowledge (*wissen*) that generates other knowledge. The first is certain and categorical. The second is uncertain and never categorically established. The first is dogmatically acquired through canonical books. The second can always be reviewed based on experience *and* on further theoretical elaboration. These differences are not trivial.

I doubt, therefore I am. The philosophical transition is epoch-making. Before Descartes a regime of unconditioned ontological thought reigned. First you are – irrespective of any condition – therefore you know. Knowledge is the knowledge of being. In the 17<sup>th</sup> century the position is reversed. First you know (it’s not important how well), therefore you are. It becomes epistemic; that is, scientific. Being is the effect of knowing. It is being epistemic; that is, conditioned by knowledge. *Etre de savoir*, being is being of knowing, as Lacan says in Seminar XX. Today, Heidegger’s motto “Science doesn’t think” brings a smile to the face. Like many humanists, Heidegger was a nostalgist of the good old ontological days when being was and not being wasn’t. However, those times are over and never to return. The transition from ontology to epistemology is a one way ride. Now the question of being, thanks to the interference of knowledge, is more complex – I would say more dialectic – than the binary one between being which is the non-being which isn’t. Science doesn’t think, it’s true. Science doesn’t think the being but the knowing and so, as we will see, the object.

*Dubitemus!*

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<sup>7</sup> This is the muddle on which current day cognitivism is based, to be considered like Heidegger’s *Ge-stell*.

Before continuing I need to stop and consider the question of doubt. What is doubt? It is an enunciation that in classical terms assumes the form of the logical principle of the excluded third. Together with the principles of identity (*if A then A*) and not contradiction (*not (A and not A)*), the principle of the excluded third (*A vel not A*) is one of the three cornerstones of Aristotle's ontology. Together, the three principles merge ontology into the binarism of classical logic: it is true to say of what is that it is and to say of what is not that it is not and the opposite is false; that is, to say of what is that it is not and of what is not that it is. From old ontological logic we move on to modern epistemic logic drawing on the principle of the excluded third.

The Cartesian doubt is the epistemic variant of the excluded third. It is formulated thus: *either I know or I don't know*, where the alternative is not an *aut aut* but a *vel*. Indeed, unlike being, which does not envisage a midway between being and not being, knowledge can have intermediate stages between knowledge and ignorance; that is, there may be stages in which you know *and* you don't know. All subsequent dialectic, that will lead the doubter to acknowledge that he is a subject of knowledge, revolves around the conjunction *and*. At the beginning I am surrounded by uncertainty. I cannot decide what my epistemic status is: do I know or not know? Luckily for us the dilemma is subjectively solvable. It leads to the positive conclusion that the subject exists, as long as we do not adopt a sceptical or inflexibly binary approach to doubt. All that is needed is for the future subject to accept a little less than classical categorical knowledge. Is it clear that if I know, I am. I am a subject that knows. And if I don't know? This is the point where scepticism is overcome – at the time of Descartes recently represented by Montaigne – thanks to the Cartesian revival of the theorem of Socrates, the only great epistemic philosopher of ancient times. If I don't know then I know that I don't know. This is a form of knowing too (clearly not categorical because it is possible to not know in many ways). The conclusion is that, even if I don't know, I am a subject who knows, but obviously not everything. In other words, whether I know or don't know, I know something, therefore I am. In both cases – knowing or not knowing – the subject emerges: the subject of modern science.

This is not difficult to follow. It is surprising that such an intuitive consideration was never suggested in ancient times. Something similar had to wait for St. Augustine before being put forward; however, always in an ontological context: *si fallor, sum*, if I sin, I exist. As I said, the only philosopher who upheld epistemic arguments in ancient times was, apart from the Sceptics, the *know thyself* philosopher Socrates. Descartes sets off Socrates' conquest and Augustine's suggestion, formulating his theorem thus: *if I don't know, then I know*. In theory, the Cartesian formula is logically equivalent to that of Socrates: *unum scio, nihil scire*. In practice, it better suits the dawn of scientific discourse as the incomplete and infinite transition from ignorance to knowledge.

### *The finiteness of the subject*

The epistemic fertility of the excluded third does not end here. It is not limited to the proof of the existence of the epistemic subject of science. It is not only the midwife of modern subjectivity but, continuing Socrates' metaphor, it is also its paediatrician and, more precisely, its perinatologist. Starting from the excluded third, more can be said about the subject: not only that it exists, but also its aspect. Thanks to the excluded third we move – as Freud said in his 1925 essay on *Negation* – from the judgement of existence to that of quality.<sup>8</sup>

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<sup>8</sup> The reference to negation is not casual. The weakening of the principle of the excluded third involves the condition and importance of negation as will be seen later. Vice versa, the

Since the beginning of the last century, thanks to Brouwer – the founder of intuitionistic mathematics – we know that the importance of the principle of the excluded third can be attenuated: although it cannot be denied, it can be suspended. Brouwer demonstrated that it does not apply always and unconditionally. It is not an unconditional universal principle on which to found logic as Aristotle demanded. Its validity is limited to specific, easily recognizable contexts: finite ones.

To avoid any misunderstanding, I repeat that the principle in itself is not negated by Brouwer's logic as the law of non-contradiction is negated by Matte Blanco's symmetrical logic. In intuitionist logic the principle of the excluded third continues to count only in finite contexts. With a further restriction that I will now illustrate. The principle of the excluded third is valid in finite contexts but not in all. Finiteness is a necessary but not sufficient condition for its validity.

Brouwer's argument is simple and convincing. I have a bag full of white and black balls. And I know that there is an odd number of balls. There are only two alternatives: there are either more white balls than black balls or there are more black balls than white ones. There is no third possibility and I am certain that only one of the two is true. The principle of the excluded third is valid a priori, whatever the number of balls, providing that it is finite and odd. Instead, if the number of balls is even or a numerable infinite, I could no longer be sure a priori that there are more white balls than black ones or more black balls than white ones because there is a third possibility, the same number of black and white balls.<sup>9</sup>

In the case of an infinite number of balls, the principle of the excluded third no longer holds true. It leaves in play paradoxical consequences, all deriving from the theorem according to which each finite set possesses a numerable infinite sub-set. If there was a little devil with a sense of fun in the bag he could play tricks on me by systematically placing white balls in my hand, discarding the black ones. I could protest, sensing that the little devil is duping me. But he would deviously answer: "Just wait a little longer. I haven't given you *all* the balls yet." And I could not counter him, but simply wait before concluding that there are *no* black balls. The negation is suspended until proved otherwise. The paradox is only apparent. Classical logic had accustomed us to the ceaseless time of eternal truth. Now, thanks to the suspension of the excluded third, time thaws and begins to flow like the water of a stream in springtime. Epistemic time is born.

As I mentioned earlier, intuitionism problematizes the logical function of negation. Intuitionist negation does not automatically pass from true to false and vice versa but affirms the opposite *until proved otherwise*, according to a logic which is similar to that of the unconscious. Denying *A* means reducing *A* to the absurd. Negation takes time; it entails a long process of reviewing *infinite* epistemic statuses to find a condition where *A* is not valid. Only at the end does the negation negate. Until we reach the absurd the negation does not negate. The function of the malignant spirit and the problem of deceit in the Cartesian rhetoric of doubt is well-known. However, my example is neither rhetorical nor does it involve theological questions. It suggests a link between the infinite and the excluded third. When the infinite is called onto the stage it is a good idea to have the principle of the excluded third leave it. The excluded third is a tight-fit for the infinite. It is a strait-jacket. The infinite prefers the company of some weak

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Freudian weakening of negation, which does not always negate, leads to the eclipse of the principle of the excluded third. If *not A* sometimes is *A*, then *A vel not A*, sometimes is *A vel A*; that is *A*, which is not a theorem.

<sup>9</sup> Wanting to use a sort of psychoanalytical numerology, the odd number is a model of error, the even number is one of castration.

variant of the principle of indefiniteness. The infinite loves weakness as any devotee of the infinite knows.

As Lacan says, in the case of the infinite the *a priori* is *écorné*, impaired. I cannot *always* know a priori how things will turn out because there are not only two cases and it takes time to decide. Aristotle and Kant's *a priori* categories waver. Certain knowledge must make way for uncertain science. (Later on I will use the technical term: conjectural). Of course *a posteriori* things always tend to work themselves out. *A posteriori* the principle of the excluded third is once again unconditionally valid also in the infinite case because *a posteriori* we fall back into the finite. If I pull out *one* white ball from an urn containing an infinite number of balls I can say that the urn contains white balls or non-white balls, because I know for sure that there is at least one white one.

I thus reach my first conclusion on the subject. The subjective status is not an empty concept. The subject, if it exists, depends on knowledge and since knowledge exists, at least in a dubitative form, then also the subject exists. But how does it exist? I answer: in a finite form. Indeed, if the being of the subject depends on the excluded third in an epistemic form (doubt over knowledge) and if the excluded third is valid only in finite contexts, the result, syllogistically speaking, is that the status of the subject is finite. In brief, if I doubt, I am. But this is valid only in the finite context and so also the consequence is surely valid at least in a finite context – even it cannot be ruled out that it may be valid elsewhere for other subjects, for example the religious one. In any case, the subject of science is finite. This is the critical point of modernity that we have to assume with a certain degree of moral responsibility. The Cartesian being-toward-finiteness, like Heidegger's being-toward-death, is not established in a categorical or dogmatic way but through the dialect of doubt. Indeed, science is not the place of mechanical determinism, as some of its detractors who maintain the positivist image of science would like to think. Nor is it the place of metaphysical certainties, assumed *a priori*. Science makes room for the freedom of the subject and the contingency of the object as I will explain below.

### *The gain of finiteness: an epistemic logic*

As Gentzen did, removing the axiom of the excluded third from Aristotelean logic gives origin to a new logic which is different from the classical, inappropriately called intuitionist logic. This, having one less axiom, would seem more restrictive than the classical one but this is not the case, as Gödel demonstrated, using Kolmogorov's lemma. Indeed in this logic, all the classical theorems involving only negation and conjunction, therefore all the classical theorems, are valid.<sup>10</sup>

In practice, intuitionist logic is an extension of classical logic. Binary weakening produces a less ontological and more epistemic logic than the classical one. Indeed, in intuitionist logic operators with epistemic characteristics can be defined. Let me mention two – knowledge and desire – because they reproduce the functioning of the unconscious “mind”. The operator “knowledge” transforms every enunciation *X* into the alternative: *X vel not X*. It makes use of theorems that liken it to unconscious knowledge. I will mention some without demonstrating them: *one cannot not know*

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<sup>10</sup> Indeed, in classical logic the other logical operators (implication, alternative and equivalence) are expressed in terms of conjunction and negation. The alternative is equivalent to the negation of the conjunction of the negations (De Morgan's law) and the implication is equivalent to the negation of the conjunction of the antecedent and the negation of the consequent (Filone's law).

(Kolmogorov's lemma); *if I don't know, then I know; knowing that I know is equivalent to knowledge*. Yet the non-theorems are just as interesting. For example, the ontological argument: *the existence of knowledge does not imply knowledge of its existence*, is not valid. This alone guarantees the lay nature of intuitionist logic and its metapsychological parallel, the Freudian unconscious. The operator "desire" transforms every enunciation  $X$  into the implication of the double negation. *if not not  $X$  then  $X$* . It simulates the behaviour of the unconscious desire. *it is not possible not to desire, non-desire is a desire; desiring implies desiring the desire*, but not vice versa; desire does not imply that you desire it. I have elaborated elsewhere and on several occasions the modal, in particular epistemic, nature of intuitionist logic and its pertinence to Freudian metapsychology.<sup>11</sup> On this occasion I will dwell on another aspect of the logical demonstration of the finiteness of the subject.

### *Continuing on the finiteness of the subject*

Let me make an observation and a potential digression. I have provided a purely logical demonstration of the existence and finiteness of the subject of science. I have not made recourse to ontological considerations on death or to phenomenological considerations on the status of perception. It is clear that the subject is limited in time, because it dies, and limited in space by the object that perceives. But more can be said. The value of the logical demonstration is two-fold. On one hand it is abstract and so its value does not depend on the historical and biological contingencies of subjectivity and it is therefore highly certain, while having being gained through doubt. On the other hand it is mathematical and as such allows us to distinguish between two topological properties which are usually mixed up: finiteness and limitedness.

Finiteness regards the existence of a maximum that can be reached.

Limitedness regards the existence of a limit which cannot be exceeded (and perhaps not even reached). These are topologically distinct and non-interchangeable concepts. The evidence given above does not only show that the subject is limited, it shows that it is finite. The signifiers in its unconscious can be counted. In analysis they are always finite. When they have run out, the series of signifiers continue to repeat themselves as Freud established in his second topic.<sup>12</sup>

The point is that Spinoza showed us limited infinites which challenge the naive (platonic) concept of the infinite as always being larger. Spinoza illustrates an example in letter XII to his friend and family physician Lodovico Meyer. The example is the set of distances between two non-concentric circles. These distances are infinite and each is limited. Vice versa, Riemann's hyperspheres used by Einstein in the first cosmological

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<sup>11</sup> See A. Sciacchitano, "Per una logica del sapere inconscio" in *Inconscio e matematica*" edited by Marcello Turno, Teda Edizioni, Castrovillari 1990, page 59. ID, "Towards an Empistemology of the Inconscious" in *Being Human. The technological extension of the body*, ed. J. Houis, P. Mieli, M. Stafford, Agincourt / Marsilio, An Après-coup Book, New York 1999, p. 332. Id. "Una matematica per la psicanalisi. L'intuizionismo di Brouwer da Cartesio a Lacan", in *Matematica e cultura 2006*, edited by Michele Emmer, Springer Italia, Milan 2006, pp. 61. I recently discovered a new operator "desire", deriving from Jankov's classical but not intuitionist law (*not  $X$  vel not not  $X$* ), a variant of the excluded third which uses theorems similar to the "doubly negated desire", but independent from these. Are there two flows of desire in the subject: of the I and of the Other, of the individual subject and of the collective one?

<sup>12</sup> The compulsion to repeat is secondary to the finiteness of the subject. There is no need to invent an *ad hoc* drive as Freud did.

models are finite and unlimited, that is, not delimited by frontiers. This is sufficient to demonstrate the independence of the notions of limitedness and finiteness as well as the autonomy of the notion of infinite which cannot be reduced to the notion of unlimitedness or, even less, to that of indeterminateness.

*Finiteness, collective knowledge*

Proof of the finiteness of the subject of science as an alternative to the intuitionist one can be found, knowing how to read it, in Lacan's essay on logical time which should now be renamed *epistemic time*. It can be read profitably today as long as it is stripped of the phenomenology which impregnates it and masks the essential point of the argumentation. If we can do this then we can find a characteristic which is lacking in the strictly Cartesian proof. I mean the fact that the subject of science, besides existing and being finite, is collective and not only individual.

We know what happened. The three subjects of Lacanian sophism, closed in a prison without mirrors, unanimously agree to carry a white disk on their back (variant: a white stain on their forehead). They all start from a situation of uncertainty. None of the prisoners can see the (white) disk on their back so none of them knows if it is black or white. They only know what the prison warden told them; that is, that there are three white disks and two black ones. However, all three prisoners reach the collective certainty that they all have white disks on their back as a final and necessary possibility of the review – which was exhaustive, as Descartes wanted – of a *finite* series – eight in all – of combination variants regarding their own *and* the others' ontological state: black, black, black, black, black, white, ... white, white, white. The ontological analysis is associated with – in practice preceded by – the exhaustive processing of a *finite* series – three in all – of combination variants regarding their own *and* others' epistemic state; that is, the collective epistemic state: total uncertainty, partial uncertainty, certainty. Certainty translates into a movement: whoever is certain runs for the door to report the demonstration to the prison warden. The conclusion could be called an analytical act.<sup>13</sup> The table below, which demonstrates that certainty can be reached even when everyone is uncertain (everyone sees two Bs), should suffice to demonstrate this.

<i>Collective ontological state</i>	<i>Collective epistemic state</i>
BBB	3 Uncertain (BBB)
NBB	1 Uncertain (N), 2 Certain (BB)
BNB	1 Uncertain (N), 2 Certain (BB)
NNB	1 Certain (B)
BBN	1 Uncertain (N), 2 Certain (BB)
NBN	1 Certain (B)
BNN	1 Certain (B)
NNN	Excluded

In this paper I will merely point out that in a scientific era a social, less ontological bond could be created; that is, based less on identity than the classical one. It would be an epistemic bond based on the circulation and exchange of one's own knowledge and that of others in a regime of original uncertainty. An uncertainty that, when diffused,

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<sup>13</sup> The exponential relationship between being and knowing,  $2^3 = 8$ , in general  $2^{\text{epistemic states}} = \text{ontological states}$ , is not casual but this is not the time or place to analyze it.

produces certainty. Sociologists who speak of the knowledge society are very close to Freudian psychoanalytical positions.<sup>14</sup>

### *The object, a problem*

If the subject exists and is finite, what has happened to the object? What can we say about it?

Quite honestly, we have to admit that we have no certainty about the object like we have about the subject, starting from the epistemic uncertainty (“either I know or I don’t know”). We could say, *objectum semper incertum*. Objective uncertainty is the hallmark of modern science. And it is exactly because of this that it can be distinguished from apodictic certainties of both ancient science which, I repeat, was not science but knowledge, and the caricatures of scientific discourse: yesterday it was positivism, known by Freud, today it is cognitivism, popularized by modern day medicine. A science that says things as they stand does not exist outside the scientific police’s laboratories or the doctor’s surgery. “Doctor, tell me what’s wrong with me” does not originate science.

That being said, empirical certainty exists, in the sense of an almost certain truth which is gained day after day in biochemical laboratories and data processing centres. It is assumed and guessed that the object of science – of all sciences and, I add, of psychoanalysis – is the infinite.

However, it should not be forgotten that, being bereft of intrinsic validity, the validity of a conjecture lies in the strength, we could say almost moral strength, of the subject that enunciates it. It is he who decides that things are how the conjecture proclaims – the object is the infinite – and waits for the consequences. The conjecture is true until proved otherwise, like intuitionist negation. But I will speak about this again later. For the moment it is enough to indicate the connection the modern subject observes first-hand between science and ethics. In modern times science and ethics either stand united or fall united. This can be seen in their mutual failures. At the risk of failing, I will now review some consequences of the conjecture on the infinite object.

### *The art of conjecture*

Before developing my considerations on the object of modernity – the infinite – I must say a few words on conjecture, defined as affirmation without demonstration.

Exactly because I conjecture; that is, I proclaim without being able to prove what I am saying, I don’t know whether the conjecture of the infiniteness of the object is true or false. The conjecture has no value of truth in the commonly understood meaning of true or false. Therefore, it cannot be dealt with using binary logic which is based on two truth values. Other methods have to be found to deal with conjecture. For example, multi-valued logics with more than two values of truth were devised for this purpose: true, false and ... One of the first was Lukasiewicz’s three-valued logic, which envisages three truth values: true, false and half-true (or half-false) which invalidates (wholly, not only partially as in intuitionist logic) the principle of the excluded third. Matte Blanco’s symmetric logic even invalidates the law of non-contradiction. I will not go down this road; instead I will continue my discourse from an intuitionist perspective where the excluded third weakens even although the bivalence of the truth values remain firm.

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<sup>14</sup> The positions of John Rawls, who speaks of a “veil of uncertainty”, in the institution of the social contract are very close to those of Freud.

Conjecture conveys only probable knowledge for which criteria of truth that are different from categorical knowledge, classically regulated by *omoiosis*, apply. Jakob Bernoulli named the first modern treatise on the calculation of probability *Ars conjectandi*, art of conjecture (1713, posthumous). I will not question the merit of the theory of probabilities here because it would take me off-course. Let me just say that the calculation of probabilities is a *quantitative* epistemic way of dealing with uncertainty to transform it into certainty but only *on average*, making recourse to quantitative considerations on the so-called probability distribution. The truth of a coin is that on average it will land on heads as many times as it will land on tails. Thanks to the calculation of probability, the coin represents the simplest case, inconceivable in ancient times, of a mechanistic, but *not* deterministic, system. It is mechanistic, like that of the lever, because heads and tails have a symmetrical probability compared to  $\frac{1}{2}$ , which represents the fulcrum of the epistemic lever, being the maximum level of uncertainty, but it is also non-deterministic because the result of each throw is not determined by the result of the previous ones.

Here I will propose a criterion of *qualitative* truth, therefore different from the calculation of probability, which also concerns psychoanalytical conjectures, those which Freud quite pertinently called *Constructions in analysis*.

From an intuitionist point of view, a conjecture is naturally false. The intuitionist criterion of truth assumes that there is no contrasting relationship between true and false. In intuitionist logic the truth can be demonstrated, the false not. Thus, the false is the negation of the truth but the negation of the false is not always automatically, always and in any case, the truth. We have to wait for the renowned evidence to the contrary to assert that the negation of the negation – the so-called law of double negation – is valid. Epistemically speaking, the weakening of the two-valued principle means that the false is merely knowledge which is not well known because it lacks demonstration. *You* know how to enunciate the conjecture based on partial clues and moral convictions but you don't know how to demonstrate it. On the other hand, an affirmation is true *for you* if you know how to demonstrate it. The antecedents of this epistemic concept of the false are advanced in all of Descartes works and in particular in the method of doubt: everything you can doubt, because there is not absolute proof that it is true, is false. Other articulations of this epistemic doctrine of the false are explained in Spinoza's *Ethics*; he considers bodily passions to be false knowledge compared to the knowledge of purely intellectual ideas adapted to the mind of God, and therefore true (See *Ethics*, part II, prop. 35).

If a conjecture is epistemically false, when can it be considered true? Obviously when it is demonstrated. However, along the path of the demonstration the conjecture can encounter stages of falsity which are increasingly less false; that is, increasingly true. In what way? In the sense that a conjecture can generate other conjectures and these others still, although all still without demonstration, but increasingly less false because they are getting closer to the final demonstration. This produces the qualitative criterion of truth, valid not only for the hard sciences (mathematics and physics) but also for the less hard science (biology and sociology) and even the "soft" science (psychoanalysis). At the end of his intellectual journey Freud manages to formulate it: analytical interpretation is true if it brings to light new unconscious material so far forgotten. In short, a conjecture, while being naturally false, is less false if it is fertile, that is, if it generates other conjectures. In modern times the truth is epistemic fertility; I mean that truth is the capacity to generate new knowledge.<sup>15</sup> It is not an adaptation to

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<sup>15</sup> I admit that I am a little verbose on this topic because I need to defend myself against my Lacanian colleagues who sustain that science excludes truth and therefore the subject. Science

the old, scientific criterion of truth. New knowledge produces science, the old produces knowledge, chiefly bookish. New knowledge is drawn out of ignorance through analysis; old knowledge can be read in the sacred book, commented by the appointed officer, the presbyter. The results of the two epistemic practices are unmistakably different. Science is partial science (conjectural) of the object, knowledge is ignorance of the object and memory of the book (in old times the canon, in modern times the encyclopaedia).

In this epistemic logic, conjectures assume a moral form. Conjectures are either good or bad. The “good” ones are fertile. They generate other conjectures and endorse the theory. The “bad” ones are sterile and “thwart” the theory. The former are adopted and practised, they even cure neurotic symptoms; the latter are discarded and left on their own. The first survive, the others die. A sort of epistemic Darwinism rules at a conjectural level. A whole range of conjectures is produced. Of these the most fertile prevail. Biologists, Ernst Mayr for example, call it evolutionary epistemology. Freud, less Darwinian than he made himself out to be, would perhaps have preferred “constructivist epistemology”.

I will now attempt to apply this epistemology to the infiniteness of the object, checking if the conjecture is good or bad. What new will it bring me? Will its consequences, even although conjectural, help me or not in the work of the concept?

### *The object, the disadaptation*

The first consideration is that, if the subject is finite and the object infinite, there can never be identity between thinking and thought. Between the two players on the primal scene, the subject and the object, a gap is created which cannot be bridged because it is impossible to fill the infinite with the finite, adapting the latter to the former.

The situation is particularly evident at a perceptive level. The subject always has a finite, therefore partial, perception of the object. Consequently, also knowledge is always incomplete. There are truths about the object that slip through the cognitive grasp of the subject. It seems to be a loss but, instead, from the epistemic point of view it is a gain. Indeed, it opens up the field of infinite exploration of the object. Science undertakes this “infinite task”, *unendliche Aufgabe* – as Freud called it – and takes it in different “objectual” directions.<sup>16</sup>

Let me give an example: imagine that the object has an infinite number of properties, indicated on a list: the first, the second, the third, ... the billionth etc.

By the way, this hypothesis is self-contradictory. Using the diagonalization method, which extends the liar paradox, both Cantor and Turing demonstrated that this list does not exist.

If it existed it would be incomplete because, starting from the properties listed, whatever they may be, it is always possible to build a new property not included on the list. In short, the objectual infinite borders on the impossible. It is impossible to

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not only does not exclude the truth but indeed uses it as the engine of its epistemic machine. Truth produces new knowledge.

<sup>16</sup> René Scheu, who translates my books into German, uses a nice play on words which unfortunately doesn't work in Italian. The object of science, which is also the object of desire in psychoanalysis, is not *gegeben* (given) but *aufgegeben* (assigned as a task). In a Freudian sense, the object is not lost, as Lacan claims, but is out of the subject's reach and he has the practically infinite task of finding it. The ethic of psychoanalysis, whose maxim according to Lacan is *Don't give up on your desire*, takes the shape of passion of the object. My maxim is: *Don't give up on the object*.

enumerate all of its characteristic properties. The object is probably a non-numerable infinite, the second infinite on Cantor's scale of infinities after the numerable infinite of natural numbers. But this is not what I want to dwell on. For the mental experiment I want to present it is not necessary to have the complete list. All I need is an infinite list, it doesn't matter how partial, to demonstrate that the finite subject can select only a still more partial, even finite, sub-list from it.

So, let's admit that the object has an infinite number of properties. My infinite conscience as a finite subject can select only a finite number: the first, the third, the two hundred thousandth etc. The others – to use a Freudian term which I conserve as it is directly linked to the fundamental Freudian idea, that of the unconscious – are repressed. What's more – using another Freudian term – they are primal repressed, that is, repressed even before the conscience removes them. This is the first, and I believe good, theoretical and practical result of the original objectual conjecture: it is (primal) repression; that is, the removal of infinite objectual characteristics that creates conscience and not, vice versa, conscience that creates repression. Conscience can only create secondary repression, adding to the infinite objectual characteristics already repressed those, again in a finite number, that do not answer any psychic principle, for example, the pleasure principle. In this way I add to my primal repression, for example, the second and one hundred and first characteristic because they contrast with my moral beliefs or my aesthetic sense. But these properties are not actually removed. Indeed, they will return to my conscience in the guise of neurotic symptoms. The correction of Freudian metapsychology which my model allows is small but significant. Primal repression is infinite, deuterorepression is finite. The result shows that in metapsychology we can loosen ourselves from positivist schemes more successfully than Freud did and – more importantly – without necessarily regressing to considerations on Aristotelean common sense. Sure, it takes a little courage and entails measuring ourselves against the infinite ... without repressing it as is generally done.

### *Perceiving is hallucinating*

The above considerations lead to other corollary ones which do nothing more than convince me of the merit of the initial conjecture.

The first regards the plurality of the states of conscience. Each corresponds to a finite selection of characteristics of the infinite object. I can select the first, the second and the third or the billionth and first or the billionth and second, etc. From a numerable infinite set I can extract a numerable infinity of finite sets. Each choice generates a state of conscience. Therefore, a numerable infinity of states of conscience exists, each of which cannot fully represent the object on its own.

The second corollary conjecture concerns the condition of each process that begins with perception and ends with awareness. Freud never repudiated this concept, from his *Project for a scientific psychology* to his essay on *Negation*. In the Freudian psychic apparatus each perceptive act is fundamentally hallucinatory. In my model the hallucination consists in the selection of certain objectual characteristics and not others. The “problem” which irremediably eliminates objectivity is structural and non-modifiable. As long as the finite/infinite contraposition bears up, perception will always be flawed, fundamentally false, even hallucinatory.

Hallucination formed the ineliminable nucleus of every perception for Freud too. The problem which tormented him throughout the formulation of his metapsychology was not: “How can I be sure of having perceived the object?” But: “How can I be sure that the object I have before me is not only an object – of this there is no doubt because it is in front of me, in German like in Latin object is *Gegenstand*, what is in front – but that

it is the *same* one that satisfied me the first time?” if I hallucinated it both times, that is, I gained different representations of it? The Freudian gnoseological problem is not about knowledge but recognition. Freud is not interested in the fact that the object is originally lost, as Lacan suggests and who in my opinion on this point incorrectly (phenomenologically) interprets Freud, but that it has been re-found, *wiedergefunden*. If I hallucinated the first time, the second time and the third, how can I say the fourth time that the object before me is the *same* as the first one? Being unable to adapt the thing to the intellect, I can never be certain that I have re-found the object. The lack of cognitive certainty places Freud outside any variant of cognitivism, but places him by rights within the scientific discourse. The Freudian adventure is paradigmatic of scientific progress. I am not certain that I have re-found the object because I don't have and cannot have infinite cognition. If we accept the initial conjecture of infiniteness of the object, then infinite cognition ceases to exist structurally. Indeed, being subjective, every cognition is finite just as the subject is finite and can never have the infinite cognition of the object. Science, seen as the practice of conjectures, is performed in the interval between finite and infinite and is therefore doomed to remain incomplete.

### *The infinite is not categorical*

Perhaps a little melancholically we could believe that, if we had an infinite conscience, we would finally attain complete cognition of the object and many of our problems would be solved. Unfortunately for us this is not the case. Why? Because the structure of the infinite *is non-categorical*.

Saying that an object is *non-categorical* means that it can be given different models, different presentations. In the case of the infinite object it is easy to verify this. The numerable infinite, used to count, is not the same as the continuous infinite, used to draw. The first uses the voice that counts: one, two, three... The second works in silence because its intervals are so overpopulated that they cannot be counted. While both are infinite, the numerable is a “smaller” infinite than the non-numerable one because it has fewer elements. It is intuitively true to say that in a straight line there are more points than numbers in the mathematician's head. Cantor demonstrated this with a self-referential procedure, which recalls Pythagoras, to establish the incommensurability of the diagonal compared to the side of the square. There's more; Cantor demonstrated that, given an infinite set, a bigger one can be built based on the set of its sub-sets. Rising through “exponentiation” up the Cantorian scale of infinities, even more complex models, in a certain sense even more infinities, of the infinite can be produced. We reach the limit infinite, formed by all the infinities ... which is contradictory. The infinities do not form a set based on the characteristic property of being infinite.

At this point the nostalgist has to think in this way. Even if the subject had an infinite conscience, the object could be a different infinite, higher for example. So, the discrepancy between object and subject – the subjective division that Fachinelli speaks about – would be re-presented. Instead of between finite and infinite, as we have seen so far, it would be between two infinities: a smaller one and a larger one. Eventually even the nostalgist, thanks to non-categoricity, will have to definitively abandon the illusion of concordance between mind and world. The mind, as I said at the beginning, is necessarily an illusion.

Allow me to make a final consideration regarding non-categoricity. In Lacanian terms the infinite is *not all*, that is, it cannot be gathered in a concept that says: “This is the infinite”. I will not go into this point here. I only note another positive consequence of the initial conjecture. I conjectured that the object is infinite and this conjecture helps me not to find myself imprisoned within a dogmatic schematism however

orthodox it might be. The infinite is not one, like the God of monotheistic religions, but multiple. Neither is it the nothing, or pure indeterminate, professed by the ancient Greeks. Suggesting that the object is infinite, in the sense of infinite plurality, automatically places me outside any scholastic orthodoxy without committing any revolutionary or anarchic acts against scholastic institutions of any creed they may be or doctrine they may profess. If the infinite rules, schools and religions could close down. The infinite is not taught, at the most it is learned.

### *The ecstatic mind*

The infinite takes me – and I consider this a further achievement of the “good” initial conjecture – to the title of my friend Fachinelli’s last book. The mind, granting that it exists and conceding that it is an albeit necessary illusion, is necessarily ecstatic. There is no mind that it is not ecstatic. There is no mind that is not outside the object. Being outside the object means that the mind is also outside itself and its mental conceptions. The ecstasy of the mind, this sort of hetero-referred self-reference is the result of the exposure of the finite subject to the infinite object. It is the experience of the sublime. Pseudo Longino, author of the treatise on the sublime, says that the *ekstasis* “bursts out at the right moment, reducing everything to crumbs.” It is obviously a lay ecstasy. In simpler terms, this excess of the infinite compared to finite perception and conscience can be called *jouissance*.

The objection usually raised at this point is that I am adopting religious positions. I do not take religious position when I call on the infinite. Quite the opposite, I believe that authentic infiniteness is contrary to any type of religious “binding”. The laity of my position is ensured by non-categoricity. The infinite is not substance because it is not one. When I accept the plurality of presentations of the infinite object – which are even more than all the possible states of conscience! – I distance myself from the religious logic of the one. A great thinker of ancient times, Plotino, the minister of the one, laboured to free himself from such logic. In the end he was forced to jump through hoops to elude the fascination of the one, moving towards the nothing. What’s more, the nothing is a good (finite) model of infinite. The Indian intuition of the zero, revealed to us by the Arabs (*zero* derives from *zephirium* which comes from the Arabic *sifr*, the Arab name for the vacuum), does not work without the parallel intuition of the infinite in the form of the limit of the division by zero. In oriental cultures the nothing is taken willingly as a model of the infinite but this is a negative way of approaching the infinite. We can do better than that for sure. The nothing, like the infinite, is non-categorical in its own way too. Indeed, at a connotational level, it is possible to conceive different vacuums or deficiencies, different “fields of tension to cross, not an inert position”, said Fachinelli. On the other hand, in the extensional concept the empty set exists and is unique.

There is a Cartesian notion that fully grasps the non-mystic peculiarity of ecstasy: the subjective uncertainty which, declining it in the plural, Fachinelli speaks about too. As we know, in Cartesian metapsychology the intellect is finite and desire (or freedom) is infinite. Uncertainty is not the error; the error is the maladjustment. But in the case of our conjecture the possibility of adjustment does not exist at the origin. There is no error but uncertainty, born from the primary disharmony between two psychic instances that allow one to move in fields not circumscribed by the other. Indeed, since Descartes claims that it is not the intellect but the will that endorses the judgment, it can endorse judgments that overstep the limited dimension of the intellect. Ecstasy is overstepping the desire to know. It is formulating conjectures that cannot be verified a priori. I have given a small example when I formulated the conjecture of the infinite object and

reviewed some of the, not immediate, consequences. For the subject of science ecstasy is achieved in the unforeseen deviation on the journey through the maze of conjectural truths, not yet written down in black and white – a deviation, a delirium. I am obviously speaking of cold, intellectual ecstasy. From Descartes we could expect no less. Cartesian ecstasy is the effect of the desire to know. On the other hand, there are also sublime examples of this type of ecstasy, warmer than that of Descartes. I am thinking of Virginia Woolf's *The Waves* or James Joyce's *Ulysses* or, why not, Charles Darwin's *On the origin of the species*, real novels of Cartesian uncertainty around the infinite object, the notorious *res extensa*.

### *The Cartesian fallacy*

The equation infinite = religious is not without some sense and should be treated with caution. As we have seen, I am an ardent supporter of Cartesian philosophy but, as I have already said, not everything about Descartes is good. His theological mask, for example, is not good because it lets the supremacy of ontology over epistemology back in through the back door after sending it out through the front door.

I am talking here about the reference in the *Third Meditation* to the ontological proof of the existence of God. Let me say it in plain words the way my religious education teacher Don Luigi Giussani taught it many years ago at the Berchet High School of Milan and the way it has stuck in my mind. "Since I, who am finite, have an idea of infinite, there must exist outside of me an infinite entity that makes me think this." Back in Descartes' days this argument led to the protests of theologians who disputed the idea that the existence of God depended on the inadequacy of my intelligence. Not being a theologian I am not greatly concerned with God. I am more concerned with the coherence of Cartesian philosophy. With the ontological argument, the procedure of doubt which leads to the subject of science is annulled. The subject goes back to being the old pre-scientific subject, reflection of the object in empiricist thought, reflection of the idea in idealist thought. So we have to admit that Heidegger's criticism is correct: the modern subject exists to the extent in which the world is represented with a scientific image.<sup>17</sup> In a certain sense with the ontological argument, Descartes, like many scientists, resisted his own scientific development, even to the point of repudiating it. I believe that my conjectural way of dealing with the infinite object renders justice to Descartes, defending him against his own latent Platonism.

However, unfortunately the argument is not over. The greatest logician of the 20<sup>th</sup> century, Kurt Gödel, rekindled Cartesian Platonism presenting it even as realist Platonism. The infinite object, according to Gödel, is not fruit of my creation. Indeed I cannot conceptualize it fully, being non-categorical. (If it were my creation, I would know it in a categorical way). Therefore, the infinite really must exist out there in the "real world".<sup>18</sup> It goes without saying that Gödel reformulated the ontological demonstration of the existence of God in rigorous, topological terms. Instead, it has to be said that these attempts at Platonic restoration have to be forcefully resisted because Platonism is the real enemy of science, and therefore of psychoanalysis, to the extent in which it envisages ideas that are "given" (*gegeben*), but are not "assigned as a task" (*aufgegeben*).

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<sup>17</sup> See M. Heidegger, "The Age of the World Picture", in *The Question Concerning Technology and other Essays*, William Lovitt Ed., Harper Torchbooks, San Francisco 1977, pp. 117-118.

<sup>18</sup> The equation infinite = real, as "what does not cease not to write", would be appreciated by my Lacanian colleagues. But it is an hypostasis which has to be resisted.

*Ignorance is not wanting to know the infinite*

Before concluding let me mention what I consider to be a form of desire for ignorance, dual of the desire for knowledge reposed by Foucault and perhaps a characteristic of the post-Cartesian age. What happens when we wish to ignore the infinite?

We ignore ecstasy. There are many ways but all can be referred to the same epistemic scheme: return to the *adaequatio*, that is, to finitary cognitive practices. In philosophy, ignorance of the infinite produces the philosophy of self-knowledge which is infelicitous and tautologically self-referential. The paradigmatic example is Hegelian philosophy, devised under the banner of the need for an historical development of the absolute spirit. This is obviously an adaptation of the finite conscience to itself, operation which does not leave traces of uncertainty and is therefore appreciated by the powers that be, allowing them to better manipulate the masses that adapt to its dictates. The development of self-conscience is indeed linear despite the small oscillations introduced by dialectics and allows easy, albeit illusory, forms of economic-political forecasting and programming. In the scientific field ignorance of the infinite produces cognitivism and ultradarwinism (like Dawkins in the *The Selfish Gene*, to be clear). These must always be distinguished from real cognitive science (neuroscience) and real natural sciences (palaeontology, ecology...).

Perhaps the effects of ignorance of the infinite on the sexual life are more interesting for the subjective life. If the object is finite, sexual activity is perversion; that is, the practice of fetishism. Hysteria has fought against this practice which according to Marxian analysis has always been the foundation of world trade. If science today has as its specific object the infinite, the merit is also and above all its own. The subject's only possible alternative to perversion is to self-exhilarate in its finiteness. Fachinelli called it claustrophilia: love for the finite and phobia for the infinite. Finally, as a lack of work around the infinite object we find madness. This is Foucault's proposal in the appendix to his *History of Madness*; an interesting proposal because it highlights the structural and intrinsic shortfall of the modern mind in the face of modernity. Madness – recites Derrida's correction to Foucault – is not the reason for the isolation of false reasoning. It is the hard core of reason that goes into exile from itself and from its own object.

The analyst has no doubts between perversion, madness and hysteria. To make progress with the analysis he chooses hysteria. He leaves the knowledge of the finite to the perverse who can elaborate it in many ways as the history of philosophy teaches. He leaves the dream of the return to the indefinite and the boundless to the mad. The analyst, as a man of science, is devoted to constructing the infinite using finite tools. A job in which he has more tools than other scientists. I mean the ease of access to the false which is more at hand for the analyst than for the "hard" scientist. Indeed, the analyst is professionally more interested in the truth of the false than the truth of the adaptation: what is true in false memories, what is true in symptomatic false satisfaction, what is true in the false love of transfer, which is a false connection with the physician (*Freud dixit*), what is true in oneiric deformations, what is true in incomplete actions and witticisms, not to mention what is true in the analyst's false interpretations. Working on the epistemology of the false, the analyst has a wide variety of choices. Sure, he has to pay an entrance ticket: he has to forget the medieval "virtute e canoscenza". Having loosened the theological constraint of knowledge, he is free to process the false, making conjectures and preparing the unexpected ecstasy "ek-static" compared to the schemes of the book. Hysteria is the analyst's indispensable ally in his endeavours to construct new forms of minds and new forms of science. In Freud and

Charcot's days hysteria challenged the medical encyclopaedia. Today hysteria is devoted to more positive and less ostentatious intellectual works. The Spinozian and unfinished reform of the intellect will be born from the cooperation between psychoanalysis and hysteria. A non-cognitive science of the inexistent mind will be born of which *The ecstatic mind* is the prefiguration.

*The infinite, object of desire*

As should now be clear, in conceiving the infiniteness of the object I have followed in my way – perhaps *à rebours* – the research path indicated by Fachinelli. Yet I wonder: is this intuition due only the friendship with a thinker like Elvio or does it also have some practical justification? I claim that the intuition of the ecstatic mind, open to the infinite, is useful in the clinical practice of psychoanalysis for one very simple reason. To use Lacan's words, the object *causes* desire in the finite subject exactly because it is infinite. In my words, desire is the problematic interaction between finite subject and infinite object within the phantasmal frame.

Let me just give a couple of examples: the eyes and the voice. As the French phenomenologists Merleau-Ponty, Sartre and Lacan teach us, the glance is not in my eye but in the "eye" of the other. The other, however, should not be considered anthropomorphically as an image which is alternative to mine but as *all* the infinite space that surrounds me. Since the points in space are infinite, I am infinitely seen by the other. But this infinite, which is so present, is not visible in itself. Proclus, 5<sup>th</sup> century AD mathematician, likened the present infinite to the darkness which is not visible but recognizable. Faced with this "obscure object of desire" we should succumb to anxiety, like in agoraphobia, or retreat within ourselves like in claustrophilia. The exhibitionist is more courageous and pretends to expose himself to the infiniteness of the "watching" space as his barycentre. Instead, the voyeur plays dirty. He tries to concentrate the infiniteness of the look in the focal point of the keyhole. He would like to become infinite like an unseen point of view that sees everything – the point of view of God that sees you wherever you are. Voyeurism of this kind is not mathematically impossible. The application of a space in a single point is called contraction. The cosmological theories of the Big Bang use this concept.

The voice is another example of the impact of the infinite object on the finite subject. Being tone deaf, Freud did not speak of the voice as a driving object, except in the isolated reference to the scream in *Project for a scientific psychology*. However, he got there in a roundabout way in the second blunder with the concept of the constant repetition of the identical. Freud ignored the infinite, or better, he had a logocentric conception of it. The *logos* or rational number, according to the ancient Greeks, starts from the relationship between two integers. In decimal notation (or binary or any other) the rational number is the infinite sequence of a finite package of numbers which from a certain point on of the expansion repeats indefinitely in an ever-equal way. In the subjective case a battery of signifiers repeats in the unconscious in an ever equal way: it is the rational side of the unconscious. The phenomenon is not due to the existence of a hypothetical death drive which pushes towards repetition but is the effect of the finiteness of the subject that can host only one finite battery of signifiers. To confront the infinite object the finite subject has no other solution but to indefinitely repeat the content of his own finite mind. The exact opposite of the ecstatic experience, which is the "break out" of originality from the "irrational" side of the unconscious. The battery is like a drum that beats the rhythm. The drum repeats the same beat over and over again, forcing the soloist, the voice, to follow the rhythm. The constant repetition of the identical is the rhythm. The rhythm is the abstract drive of the object voice. Not

knowing how to speak of the musicality of the object, Freud spoke of the death drive that repeats itself identically to infinity. But this is merely an artefact of his ignorance. It is not necessary to introduce a new drive, and certainly not that of death. Its effects can be quite clearly inferred from the finite-infinite interaction. Lacan fared better than Freud; he saw in the voice an object of desire, to the point of inventing the corresponding drive, the invocatory drive which calls the subject to the being, to the finitude.

### *Finite and infinite analyses*

I could continue to describe other infinite objects or present other models of the infinite object but instead I will sum up with the final consideration which confirms the fertility, therefore the truth, of the conjecture of the infinite object. A conjecture which is so fertile that we could say that the theorem of the finite subject derives from it. It is not unconditioned but conditioned, perhaps even produced, by conjecture around the infinite object. Using a pun: the inexistent mind exists because the infinite exists.

All I need to add about the infinite is a comment on the controversial question of *endliche und unendliche Analyse*, maddeningly translated into Italian as “terminable and interminable analysis”. Finite analysis is the analysis of the finite subject as outlined above. It is also terminable because it has to review only a finite, albeit unknown, number of signifiers present in the unconscious “mind”. This is the principally curative type of analysis. However, since cure and research either stand or fall together in analysis, finite analysis cannot stand alone without infinite analysis; that is, without analysis of the infinite object. It is analysis of the infinite object that specifically assumes the characteristics of research. It is not necessarily interminable while dealing with an infinite object. Indeed, it ends with its characterization, which could be axiomatic but may take even more extraordinary directions, because infinite analysis has many characteristics of research, fewer of cure and even fewer still of justification within some sort of orthodoxy. The infinite is not justified within any conceptualization because, the infinite object being essentially “ecstatic”, it lies outside any conceptual systemization. I would say that it is didactic analysis without a master. Indeed, no-one can call himself a master of the infinite. We could say – and with this I really have finished – that analysis of the infinite object is “ecstatic” analysis where the subject disappears – literally falls into *aphanisis* – when faced with the object.