Mind-body-relation: the unitarity of living beings

by Antonino Giorgi[*], Girolamo Lo Verso[**]

Premise

Writing an article on the unitarity of living beings involves considerable linguistic difficulty in venturing into uncharted stylistic waters in the attempt to avoid fragmentary, dualistic definitions of *mind-body.* Despite juggling with lexical substitution, paraphrase, inter-word contractions, there is always the risk of failing. This is because in our culture, the two terms are diametrically opposed and the only possible way of reconciling them involves compound words like mind-body, psychosomatic, bio-psychological, which even graphically reveal the sharp dissociation between the two dimensions of living beings.
A trick may then be to fill the verbal gap by starting from the signified to reach the signifier and to identify a term that at the same time covers the foundation and the development, the psychic and the somatic. The concept that seems to us to perform this function of simultaneous integration is '*relating'*.

Introduction

Since the Eighties neuroscientific research has developed rapidly, moving towards a closer and closer interconnection between the psychic and the biological. The Nobel prizewinner Eric Kandel (1998) maintains that the new advances in neurobiology and psychiatry have enabled the two fields to make major steps towards reconciliation, overcoming prejudicial positions and entrenched loyalties to their respective schools. Specifically, this has allowed psychoanalytical insights to guide the search for a deeper understanding of the neurobiological underpinnings of behavior.
This gives scientific legitimacy to the theory of a psychic and a somatic which simultaneously arise *in and from the relationship*. It emerges clearly that the development of the nervous system is an "experience-dependent" process: in the first stages of life the significant relations are in fact the primary source of experience modulating genic expression in the brain/at the cerebral level. *Relationships with others have a fundamental influence on the brain*: the circuits mediating social experiences are closely related to those responsible for integrating the processes that control the attribution of meaning, the organisation of memory, as well as the modulation of emotive responses and the regulation of the organism's functions. (Siegel, 1999).
This article, by means of an epistemic-theoretical study of some recent discoveries in the neurosciences[1], underlines that today it is realistically and scientifically possible to finally overcome the traditional mind/body dichotomy, and also causal concepts based on a *before* and an *after*, such as *psycho-somatic* or *somato-psychic* concepts. The process of finally getting free of such segmentation of the living world into discrete units, has in fact often risked going no further than the formulation of a noble intention and/or of a statement that smacks of utopia.

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[*] PhD student in Public Relations, Palermo University, specializing in Psychotherapy. Address: via Raffaello n. 36, 25124 Brescia (Bs); e-mail tonigiorgi@libero.it

[**] Full professor of Psychotherapy, Università degli Studi di Palermo. Address: Dipartimento di Psicologia, Viale delle Scienze, EDIFICIO N° 15, 90128 Palermo (Pa).

[1] Compared to a few years ago, today our disciplines - fortunately – have to deal much more often and with greater scientific curiosity with a whole series of new discoveries and findings that come from the world of the neurosciences at a rate that was previously inconceivable. However, in our view, this must be done with a critical spirit and ethical sense and we must not allow ourselves to be carried away by acritical enthusiasms and extreme technologisms. In philosophical terms, we must avoid the risk of being more and more technologically advanced and emotionally primitive.

This is why, from our point of view, coping with this above all means being epistemologically aware that it is no longer possible to adopt the categories of *mind* and *body* in a traditional ontological scientific sense. It is indispensable to expose the naïvety and scientific inadequacy of a study of the mind-body issue that does not include the concept of *relating* in its paradigm (Giannone & Lo Verso, 1996).
Paradoxically, the overcoming of individualistic monadic reductivism is triggered precisely by neuroscientific research and by the fact that it links, as we said before, neurone growth with the experience of human relations by means of which each person evolves into the realization of himself.
The psychiatrist Daniel J. Siegel (1999) writes that the mind is the product of interactions between interpersonal experiences and the brain's structures and functions, but he radicalises his relational position by maintaining that human connections shape the development of the nervous connections that give rise to the mind. The thesis presented in his famous book *The relational mind* (Siegel, 1999) meets, from a purely neuroscientific standpoint, the hypothesis of the historical-relational basis of the psyche, which is the theoretical core of the Group-analytical subject model (Lo Coco & Lo Verso, 2006; Lo Verso, 1989, 1994), and the observation standpoint of the present authors.
Clinical and psychotherapeutic experience[2], the contributions of complexity theory (Morin & Pasqualini, 2006) and of the constructivist model (in the aspects focusing on psychodynamics), the development of the neurosciences and clinical psychology (for example infant observation, attachment theories, studies on family conception and the transpersonal transmission of the psychic), with the heuristic opportunities that they have opened up, have therefore led us to propose a mind-body model that neither lumps together nor separates the three aspects of the mind-body-relation problem, but sees them as three observation standpoints, each of which can and at times must be favored with a conscious "as if" instead of putting one standpoint before another. Although until a short time ago this model appeared not yet able to bring together the multiple aspects of the problem, today it seems strong and complex enough, both in theoretical and epistemological terms, to be a useful basis for further, more specific in-depth study.

Relational processes and corporeal processes

The greater degree of comparability[3] today between the epistemology of clinical psychology and that of neurobiology has triggered a paradigm shift that has taken the form of a hybridization of disciplines, which is fundamental for an understanding of the connections between relational and corporeal processes.
While we are wary of offering a-critical superimpositions and hasty eclecticisms, we can say, however, that immunology (Ammaniti, 1989; Fasolo, Ambrosiano & Cordioli, 2005; Rispoli & Andriello, 1988) and the latest research in the neurobiological field, by embracing a multidisciplinary approach that uses the contributions of psychology, psychiatry and philosophy of language, have tried from a cerebral viewpoint to develop the issue of the original intersubjectivity of the human mind, which is what *Subjectual Group Analysis* has called *transpersonal.* It is understood by Lo Verso (1989, 1994) as the whole set of relations in a specific cultural environment, that the individual "incorporates" dynamically from his birth

[2] Obviously the reference is not only to the group analysis experience, with which however we identify and in which we *see* how not only mental but also biological aspects are changed by relating.
[3] For clinical psychology, but also for some recent directions in the neurosciences, on the other hand, a comparison is impossible with the super-reductionist idea of the brain as a computer, a metaphor that at times seemed to carry its devotees away, making them forget that even if a computer could be made to reproduce the working of the human brain exactly, for it to resemble man it would need to have the experience of being a mother, of having a family, of having playmates, of feeling hunger, thirst, desire and sexuality, envy and hope etc. If all this were provided, the computer would have mental and affective functions identical to those of the human being, and at that point, as science-fiction shows, it would be a human being.

onwards; it is therefore a fundamental anthropo-psychic factor in the emergence of the psyche and therefore of the personality.
More and more neuroscientists believe that the brain is a flexible organ open to experiences, capable of assuming different structural and functional connotations, depending on the genetic and experiential bases characterising the single person. This flexible (and in some respects also dynamic-experiential) conception of the brain is crucial for us because it creates possible alignments and compatibility with the results of clinical psychology research. This approach is well-known in the scientific world and beyond by the name of *neural Darwinism* (Edelman, 1995, 2004, 2007). Edelman's now classical theory about the mental element is based on the observation that from the embryonic stage, the brain develops, creating links between neurons: from the almost infinite network of neural connections, every individual develops some and not others (the phenomenon of neuronic pruning), in response to the stimuli that he receives from his senses.
The neural constitution is therefore influenced by the outside world right from the early months of birth. The partial cultural influence on the genes allows everyone a subjective moment of growth, also at the cerebral level. This model essentially permits us to hypothesise far more clearly that neuronal flexibility[4] and culture can intertwine and create intelligence. On this point, studies on the relations between the brain's structure and functions constantly provide new and increasingly accurate indications of the mechanisms through which experiences influence man's mental processes (Eisenberg, 1995; Kandel, 2007; Milner, Squire & Kandel 1998). Essentially the mind is no longer to be seen in terms of structure but as a dynamic process emerging from the brain's activity, the structures and functions of which are directly affected by interpersonal experiences (Siegel, 1999). In particular, the mind develops from processes regulating the flow of energy and information inside the brain and between different brains (Siegel, 1999). The concept of the mind as an entity therefore needs revising. The mind is not a thing or an object localised in the body or in space but it is a *rope* used to circumscribe numerous psychological processes, different mental phenomena and personal experiences, even though they are connected. The days are over when one could talk about the mind or the brain or about their links; today we are dealing with a multiplicity of cerebral-mental phenomena and with their relations. The multiplicity of mental processes is usually indicated as the mind and works at a higher level of biological organisation than the brain.
A great deal of scientific literature indicates that the growth of the brain is the outcome of the effects that experiences have on the expression of genetic potential (Benedersky & Lewis, 1994; Gunnar, 1992; Goldsmith, Gottesman & Lemerey, 1997; Kendler & Eaves, 1986). Human DNA is made up of genes, which in turn contain the information that allows neuronal cells to be differentiated, to develop and also to die, during the construction of cerebral

[4] Interesting studies have been carried out on primates and confirmed on man (Eriksson *et al.*, 1998), showing the presence of nerve *stem* cells that can reproduce themselves if properly stimulated. This would indicate a particular kind of *plasticity* that might open new avenues for the treatment of neurodegenerative illnesses (Shihabuddin, Ray & Gace, 1999). Currently, however, since in neurodegenerative pathologies it cannot be expected that nerve fibres will grow or synapses will proliferate in response to the compromise of the usual neuronal circuits, patients' cognitive *reactivation* (contrast with neuronal impoverishment) is crucially supported by *redundancy* and the *trophic function* (Bianchin & Faggian, 2006). For these patients, even doing pleasant activities like visiting relatives and friends, having a pizza etc, play an important *role* in *compensating* the cognitive decline (Scarmeas, Levy, Tang, Manly & Stern, 2001). Essentially, the fact that we want to point out is that even in the case of serious neurodegenerative illnesses with a negative outcome, relating and its quality, seems able to slow down the process because it provides both a better quality of life (both for the patient and for his family) and a stimulation for triggering and strengthening the processes mentioned. In particular, we hypothesise that certain relationships, being significant for the people and underpinning their identity, *succeed in* (or *prevent from*) carrying out these functions more than others, with reference to the quality of family relations including in particular that between the patient and his caregiver (Cigoli, 2006).

circuits. For Siegel (1999) these are processes that, though programmed genetically, are at the same time “experience–dependent”.
Genes play two fundamental roles in the development of human life (Kandel, 1998). The first is related to their capacity to allow the transmission of genetic information from one generation to the next. The second role, which works at an ontogenetic level, is related to their capacity to determine the type of protein synthesised at the cell-level. This second function can be considerably affected by the experience that every human being has of being in the world: human experiences can directly influence the transcription and therefore the way genes are expressed through protein synthesis (Siegel, 1999).
As far as the brain is concerned, this means that experiences can have direct effects on the processes that lead to the development of neuronal circuits, forming new synaptic connections, modifying the pre-existing ones or favoring their elimination (Kandel, 1989, 1998; Post & Weiss, 1997). During the child’s cerebral development, the social world is the main source of the experiences that influence the creation of genes. The changes induced at the level of genic transcription cause structural changes in the nerve cells, thus shaping the *relational mind.* In turn, the mind’s activities lead to physiological variations in the brain that can give rise to the creation of different genes (Siegel, 1999). The mind, in all its phases of life and stages of development can modify the brain’s structures, functions and neuro-anatomical connections. This constant malleability is connected in various ways to the *radical relational essence* of the mental which continually builds structural pairings with the environmental system (Napolitani, 1987), that is, new combinations between the things of the world, which give rise to an incessant psychic dynamism. From a neuronal view of the relational essence of man, given great exposure in the clinical-epistemological literature, this corresponds to the mirror-neurons (Rizzolati & Sinigaglia, 2006), that is, a specific kind of neuron that is *triggered* both when a person performs a certain action and when he sees it performed by others. It will be fundamental for clinical psychology to have data that tells us what happens in terms of mirror-neurons when *mirroring* (Foulkes, 1976) occurs in the mind of a person who is thinking, imagining, desiring, daydreaming of a relational moment with another person. And also when this occurs in dreams. The question arises from the fact that the imagination is known to create identification (and this makes things identical to us).
As for actions, these neurons make it possible to immediately grasp the emotive reactions of others. Essentially the discovery of mirror-neurons has revealed that the reciprocity linking us to others is a *natural* pre-linguistic, pre-conceptual and pre-rational human condition (Rizzolati & Sinigaglia, 2006). This seems to suggest that they are the prerequisite, necessary but not sufficient, for empathic behavior between people, and at the same time that this behavior is actually linked to experiences.
Sharing, at a visceral motor level, another person’s emotive state is a different matter from feeling empathic involvement towards them (Rizzolati & Sinigaglia, 2006). There is not an automatic correspondence between the mirror-neuron “mechanism-system” and feeling empathy for the other person. In fact, this possibility, and more generally the countless ways of *feeling for the other person,* are also, and above all, related to the quality of the relations between people: from our point of view, to their identity in a subjective sense. Conversely, for a full and effective emotive communication to be established between two people, each of the people in question must let their state of mind be influenced by that of the other person, and therefore *feel* and be in syntony with that person. Hence the axiom underlying this article: *relating is the basis of the living being* (and therefore of all psychotherapy work).
It is clear that the relationship between mirror-neurons and psycho-relational facts still needs to be studied in greater depth in many respects involving the symbolic, the emotions, mental re-elaboration, the meanings attributed to others’ emotions, the role that family and cultures play in modelling and shaping the system of mirror-neurons. This last point seems to us to be particularly important. According to Iacoboni (2008), mirror-neuron activity is related to primary intersubjectivity (Trevarthen, 1979), that is, the first interaction capacities shown by the infant and developed in interacting with its caregivers. Essentially, the mirror-neurons are constituted and modeled during and thanks to this early fundamental relating and, from

our point of view, the discourse can also be extended to cover all the significant relational experiences (internal and external) that human beings have in their everyday life[5].

Although it is not unlikely that some of these cells are already active in an extremely early stage of life and facilitate the first interactions, I think that most of our system of mirror-neurons is actually formed over months and years of such interactions. More specifically, it is likely that the formation of mirror-neurons in the child's brain takes place during mutual imitation, as we have seen happening in smiling. If mirror-neurons really are modelled in our brain thanks to the coordinated activity of the mother father and child, then these cells not only incorporate the self and the other person, but begin to do so in a phase in which the child has only an undifferentiated sense of 'We' (mother-child or father-child) and still no sense of an independent 'I', that is, before being capable of passing the mirror test. From this primary We, however, the child slowly but surely comes to perceive the other person in a natural, direct way, obviously with no complex inference: he develops until he can, by detaching it from what was indistinct, gain an adequate sense of self and of the other person. How? With the help of a special kind of mirror-neuron, which I have called super-mirror-neurons. For all his life, from that moment onwards, the activity of the mirror-neurons will continue to be the neural imprint of this sense of We to which both the self and the other person belong (Iacoboni, 2008, pp. 135 -136).

The super-mirror-neurons seem to be cells:

"that show a very interesting pattern of neuronal activation: their activity increases while the patient is performing the action, as in monkeys; however, in sharp contrast with monkeys' mirror-neurons, they completely stop their activity when the patient is observing the action. Such an activation pattern allows us to suppose that these cells can perform an inhibitory role during the observation of the action. With their switching off, they might be *telling* the more classical mirror-neurons, as well as other motor neurons, that the action being observed is not to be imitated. Besides, this differential coding for actions performed personally (increased activity) and the actions of others (reduced activity) might constitute an extraordinarily simple neural distinction between the self and the other person, implemented by this special kind of super-mirror-neurons (…) In actual fact, the cerebral areas in which we recorded these cells are the least developed in early childhood and show radical changes in later phases of development" (Iacoboni, 2008, pp. 174 – 175).

What is sustained here is very significant for us, above all for its convincing relevance to groupanalysis theory, a relevance that for the purposes of this article, we cannot record and

[5] The discovery of mirror-neurons opens interesting possibilities. In this article we offer one such hypothesis, aware that it is only an idea not supported by empirical data although some recent elaborations/research tell us how far mirror-neuron systems can be modelled by experience (Iacoboni, 2008). We suppose that in man, different mirror-neuron systems may develop, some of which are able to *let us feel* some of the *other person*'s emotions with cultural connotations. For Subjective Group Analysis the concept of relating takes on characteristics that are totally special and specific: it is also seen as an unconscious psychic process underlying identity. In other words, we are again talking about the *transpersonal*, specifically about the *ethnoanthropological* level (Lo Verso, 1994). We hypothesise that the quality of this level, far more than others, influences and contributes to the construction/modification of specific mirror-neuron systems in different environmental contexts. We think that in Sicily a certain kind of transpersonal element, as well as contributing to the construction of *mafia psychism* (Lo Verso, 1998, 2005) or *mafia thinking* (Fiore, 1997), may have contributed to the construction of a mirror-neuron system that can immediately let *Sicilians alone* immediately understand, in a pre-linguistic, pre-conceptual and pre-rational form certain of their nuances and emotional states that inform their daily life. For instance, during a psychotherapy session, a Sicilian patient, related to a mafia boss, starts to talk about the mafia and lowers his voice, similar to the behavior of the therapist, who is also Sicilian. In this case, we can boldly hypothesise at a neuro-biological level, that their emotional sharing is immediate because it is mediated by a specific system of mirror-.neurons. Obviously, this in no way clears up the complexity of the phenomenon described, since there are other important factors of a psychic kind involved and they *co-determine* it in a radical fashion (Lo Verso, 1998).

elaborate in depth. However, it seems clear that the mirror-neuron system largely represents the neuro-biological link of the assumptions of Subjectual Group Analysis about the relational essence of the human identity. Obviously this is not exclusive to our model.
By focusing on the field of psychotherapy, the relation between mirror-neurons and psycho-relational events becomes central, as does therefore the neuro-relational processes that such simultaneous intertwining entails on a symbolic and emotional plane. It is highly significant in this sense that the mirror-neurons, and perhaps all cerebral activity in general, are triggered both by external events and by the same events imagined (Oliviero, 2008). This clears up a question we asked ourselves earlier. When (*very often*) thought, imagination and even dreaming concentrate on external experiences (and therefore on relations with others), they probably trigger neuronal events even when there is no real interpersonal experience, and this means the activation could be connected to an internalised or fantasised relationship. From this point of view, a fascinating question concerns the destiny of emotive-relational experiences lived unconsciously. We are certainly not talking about a question sparked off by idle speculation since great importance has been placed on unconscious (or unaware) processes by all the current research approaches related to the neurosciences or to psychological research (Oliviero Ferraris, 2007; Solms, 2007). After all, thinking about internalised unconscious relations is in continuity with what was found by the mirror-neuron system. Their discovery shows how deeply-rooted, profound and indispensable for the human being is the bond with the Other person and how bizarre it is to conceive it without a 'We' (Rizzolati & Sinigaglia, 2006) both in terms of the understanding of human nature and more specifically in the epistemic-theoretical choices for the care of psychic disorder (Lo Coco & Lo Verso, 2006).

Subjective anthropo-bio-psychic continuity

The circular connections mentioned between brain – mind – world already provide us with important elements and hypotheses on the relation-somatisation axis which we would like to examine more closely. A decisive step forward however is made possible by the links between the central nervous system and the immune system and, more recently between these and the endocrinal system. In fact, in recent years many studies have focused on the relations between neuroendocrinal processes, immune processes/phenomena, behavior and the mind, showing the presence of multidirectional flows of information between the neuropsychic immune and endocrinal systems. These flows are also supposed to be able to carry out complex reciprocal regulative activity on and between the systems mentioned. The evolution of these studies on the *simultaneousness* of internal communication has given rise to the interesting new research field of psycho-neuro-endocrine-immunology (Cohen & Herbert, 1996), which essentially deals with studying how the events of everyday life influence the level of efficiency/efficacy of the immune system. It is obviously unrelated to the purpose of this article to deal with the numerous studies of psycho-neuro-endocrine-immunology, whose important contribution we acknowledge and with which scientific reciprocity is required[6].
However in this research field we are particularly interested in the lines of study like that of Pert (2000), which point out the presence of a more widespread parallel extra-synaptic system (peptide neurotransmission) representing the biochemical substratum of the emotions. On this point, the well-known biologist writes:

The research carried out has shown me that when emotions are expressed, in other words when the biochemical substances underlying the emotions flow freely, all the systems are integral and

[6] This need is dictated by the fact that much of the current scientific research is pervaded by self-interested reductivism. Currently, the most active seem to be the pharmaceutical industries, which, by finding for example that serious depression involves some synaptic neurotransmitters, conclude that the problem is merely this, and that depression is therefore only a chemical-electrical phenomenon.

supportive. In contrast, when emotions are repressed, denied, and are prevented from reaching their potential, the paths of the psychosomatic network are blocked, preventing the flow of unifying chemical substances that are vital for wellbeing, and that regulate both our biology and our behavior (…). Most psychologists consider the mind as if it were split from the body, a phenomenon that has little if any relation to the physical body. On the other hand, doctors treat the body as if it had no connection to the mind and the emotions. And yet the body and the mind are not separate, and we cannot treat one without the other. My research has shown that the body can and must be cured by means of the mind, just as the mind can and must be cured through the body (Pert, 2000, pp. 328 – 329).

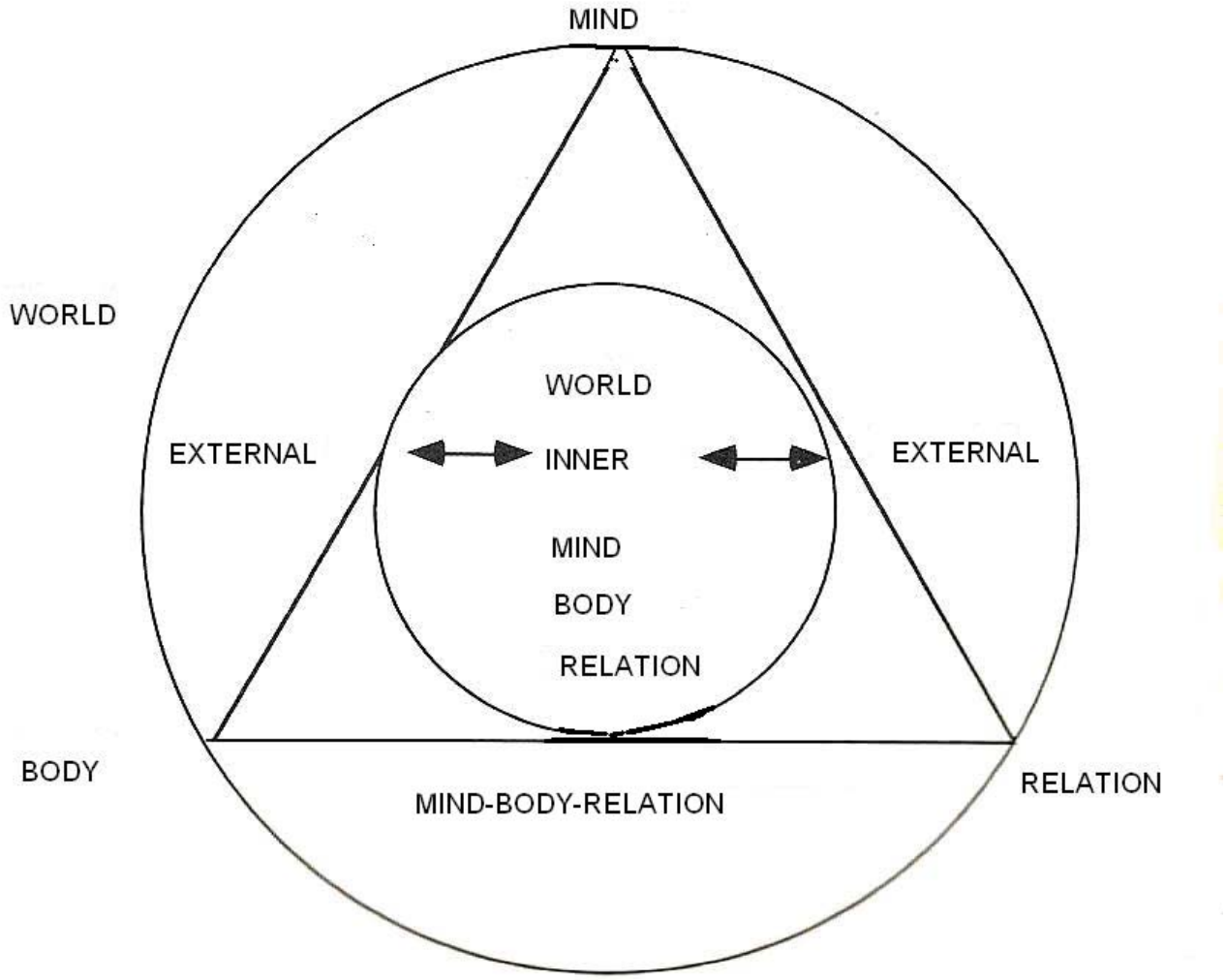
The scholar has in fact repeatedly underlined in her works that the emotions are in the brain and also in the body and that they are expressed biochemically in both places by means of the neuropeptides, reaching the conclusion that a clear distinction can no longer be made between brain and body.

If we accept the idea that peptides and other informational substances are the biochemical basis of the emotions, their distribution in the nervous system has an extremely vast effect, which Sigmund Freud, if he were still alive, would be very happy to highlight as the molecular confirmation of his theories. The body identifies with the unconscious! Repressed traumas caused by an excess of emotions can be stored in a part of the body, later influencing our capacity to perceive that part or even to move it. The new research underway suggests the existence of an almost unlimited number of ways in which the conscious mind can access the unconscious and the body and change it as well as providing an explanation for a certain number of phenomena on which the theoreticians of the emotions are still meditating (Pert, 2000, p. 167).

From the research point of view, moreover, some lines such as that of the Reich centre research group in Naples have already studied the body in a psychological key, that is, as an open, relational system (Rispoli & Andriello, 1988). Essentially, a circular, non-reductionist epistemology allows us not to be shortsighted about the strong presence in the body of the mental and the relational dimensions, and on the other hand, those who deal strictly with the mental cannot but find profound traces of the body in everything related to their specific object of study (Giannone & Lo Verso, 1996).
What has been said so far therefore allows us to formulate some conceptually pregnant hypotheses on the anthropobiopsychic continuity of human life. We see as absolutely reliable the assumption that in a sense all illnesses can be considered psychosomatic (or *biopsychic or psychobiological*) and we can assert with greater epistemic and interdisciplinary rigor that the relational dimension is central, constituting the real and imaginary scenario within which emotional life unfolds (Lo Coco & Lo Verso, 2006). Essentially it is not enough to talk about the mind-body relationship, even in an advanced connectionist and circular logic. To the two elements we must add the third pole, since without relating there can be no bodily or mental development, because it is a fundamental fact that has to be conceived and posed beyond social interactions, but underlying them. Human life is acknowledged only in the presence of the corporeal, the mental and the relational. For the disciplines that deal with the issues discussed so far, the problem is therefore to manage to construct a vision that can capture the irreducibility of the corporeal in relating, the irreducibility of the relational in the corporeal without creating chaotic agglomerations, but also without attempting impossible operations of hierarchical and linear ordering, keeping in mind that if a hierarchy is considered between the three levels, it is undoubtedly a muddled hierarchy (Dupuy, 1986).
The mind-body-relating model[7] (Lo Verso, 1994; Giannone & Lo Verso, 1996; Di Blasi & Lo Verso, 2006) that we examine closely here and which needs further work, seems to have reached a maturity that can help to make the task of mastering the inevitable complexity

[7] The diagram of the proposed model tries to show the "mind-body-relating" reasoning we have put forward. Above all, the way they are related belongs both to man's relation with the outside world, and to *his inner world* whose symbolic boundary is the skin, with the epistemological viewpoint seeing it as an object of study (Giannone & Lo Verso, 1996).

less difficult. Naturally we are aware that in our proposal there is more than anything an epistemic-theoretical framing available for future research.



The relating treatment

The relating treatment[8] seems to be a good title for this part of our work, which we will open by briefly describing two clinical cases.

Giacomo had suffered for years from all kinds of disorders. It was not only his psyche but also his body that could be described as borderline. He lived at home with his mother and aunt and thanks to their care-control he was able to survive amidst medication and attempts at psychotherapy. In the second year of his group work, he went through a crisis when the other members of the group punctured his fantasies and daydreams, and he found himself in the difficult stage of coming from *space* back to earth, which seems painfully inevitable in therapy for this kind of patient[9]. Giacomo had

[8] *Cura relazionale* [Relational cure] (Lo Coco & Lo Verso, 2006) puts forward an interpretation of psychic suffering as a "relational" phenomenon, not exclusively reducible to the functioning of a single person but as an event that acquires meaning within the network of relations in which the person is involved. Such a reading of psychic suffering implies the resulting elaboration of methods and models of treatment that envisage the multiple relationship between people as a means of transformation/change. The task of those who treat, the carer, is therefore that of thinking of and constructing therapeutic projects that can hold together the person's significant relational network.

[9] We call this difficult stage of transition and suspension "space without".

always had feelings of disgust for himself, due to a childhood seen as being sexually *dirty*. For a long time he had also been suffering from a hysterical semi-paralysis that made it hard for him to walk. His idealisation of his mother and of her pure and chaste parts had come to focus on a local woman who had died years before and was in the process of being named "blessed" by the Church. Like others, he said he smelt the *perfume* of flowers coming from her tomb, and this made him say he wanted to be chaste and that he had been right to have hardly ever been with women and not to have married. In the period when he was working with this group, often leaving and acting all this out, he was present at the opening of the tomb of the presumed saint, whose body at that point was no more than a pile of bones. This experience of confronting the *crude* reality had led him to arrive at the group in a state of shock and break the lamp that lit the room. Later he told us a series of dreams of which the group elaborated a symbolic equivalence between the group and the lamp which pushed him to look inside himself, and the opening of the tomb that revealed the decomposition and human normality of the presumed saint. What we are interested in pointing out here is the fact that, at the end of the session, Giacomo was able to *put his feet on the ground:* the paralysis in his legs had disappeared and now, many years later, it has never come back. A miracle? In the light of what has been said, we do not think so.

The second clinical experience we want to relate is that of a case of epilepsy which had been sent to one of us by an important university clinic. The patient, a wealthy girl with an average educational level, coming from a family where the father's sexual potency is legendary, had been diagnosed with *psychogenic epilepsy*. She had about ten crises a day, but apart from this, in a year of group therapy, the therapists had not been able to find any psychic phenomenon that could help to make sense of such a serious somatisation. Their suspicions about this led them, despite the fact that they did not have medical training, to advise the patient to have the neurological aspects investigated further. With more thorough diagnostic observation, it turned out that the epilepsy had neurological causes and with the administration of the proper medication, it disappeared. The situation could have been embarrassing for the analysts who, though not responsible themselves, had worked for a year on the wrong diagnosis and an unsuitable treatment. However the patient said that he experience had helped her to mature psychologically and emotively, and this was an *absolution* for the therapists. The interesting thing, in terms of our present discourse, was that the involuntary micro-empirical-research showed that the patient's crises during group therapy diminished to 4 or 5 a day and, not coincidentally, they occurred only during sleep. Yet again it emerged that a relational process can modify states that are strictly organic (and obviously also vice versa)

We think that presenting these clinical examples is already enough to give an idea of the importance of the group-body relationship and to further clarify our desire, linked to clinical work, to start from the observation of happenings in analytical groups to examine mind-body-relating and to try to draw scientifically and professionally relevant conclusions.
The importance attributed in this work to the *group* context arises firstly from the heightened empirical attention: in fact also in analytical groups, which are seemingly not directly connected to biological matters, the bodily dimension has become more and more central. Secondly, though not in order of importance, it arises from the recognition that from the methodological point of view, Subjective Group Analysis focuses on the subject-otherness-body relationship and not only on the register of the psychodynamically internal relationship. The group constitutes a privileged observation point to grasp the "contemporary" nature of mental-biological-relational events and this is supported both by our theoretical model and by the clinical evidence of others. In fact studies on the relational process in the experiential field of the psychotherapeutic situation (Lo Verso, 1989) show that every psychic event is realistically experienced in the body and vice versa; even more radically, it seems that this can be extended to all relational events (Lo Verso & Lo Coco, 2006). Our research and clinical practice, not exclusively psychotherapy, is related to the *brain-mind-experience* relationship or that of *world-perception-emotion.* In other words the approach of the neurosciences tries to clarify the connections that go from the mind inwards (*brain-body*), while psychology tries to clarify the relations that go from the mind outwards (*relation*) and this obviously requires tools and methods of observation, biological in the first case and

psychological in the second. It is hoped that interdisciplinary research may in time construct/elaborate a model that is increasingly complex and inclusive of multiple aspects.
There is one concept that intrigues us. The therapeutic group is based first of all on communication, as is psychic life generally (both *intra* and *inter*). At least at an analogical level, but perhaps more, this is linked to the fact that neurons are cells designed to *communicate* (Boncinelli & Boncinelli, 2008). The *mind-world* link is intrinsically connected to relational processes seen as affective and symbolic channels that are linked to the identity and the basic emotions of human living such as fear, anger, desire etc., in a dynamic way, and which can be *passed on* through the family.

A young patient experiences the entry into the group with a terror that the group finds "with no reason and no name". It seems to have originated in connection with the fact that the girl has spent her entire life with her parents, and the mere fact of being away from home with strangers, including males, who she looks at and who can look at her, depresses her and excites her. But the origins of the story are older than the Oedipal and attachment-bond problems present. Her uncontrollable anxiety (for herself, since in the world she may risk relating) seems to be that of her parents, who have had the experience of losing three new-born daughters, before the girl's birth. In a preliminary interview, the mother describes her as "our only treasure": to keep in a gilded cage, so that nothing and nobody can steal her. The parents also do not find it strange to have kept their daughter sleeping in their room until she was a teenager.

In sum, our thesis, systematised elsewhere (Di Blasi & Lo Verso, 2006; Giannone & Lo Verso, 1996; Lo Coco & Lo Verso, 2006; Lo Verso, 1989; Lo Verso, 1994; Lo Verso & Federico, 1994; Lo Verso & Vinci, 1990), is that relating *nourishes, cures* or *destroys*, and also affects the corporeal level, since psychic life, and also biological life, originate in essentially psychosomatic relational processes[10]. The deep relationship with the other (with a groupality that is *world-culture*, and not only with the mother) is the central fact of human life. From a Subjective Group Analysis standpoint, we wish to reiterate that the concept of relating does not just describe the visible social interactions of the human being and of the psychic relational fields existing between people and present in the inner world of each of us.
Essentially, it is by relating that the mind is capable of creating other minds and at the same time of being created by them (Siegel, 1999) and of influencing/changing both the cerebral structures (Kandel, 2007) and the neuropeptide networks (Pert, 2000) found in man (in the sense of brain and body). According to Pert (2000), being liberated from emotions by sharing/expressing them (we would say by relating) stimulates the circulation and the release of neuropeptides, which are found in the brain and in the body, bringing well-being and balance, lessening somatisations, strengthening the immune system etc, and therefore generally improving people's health.
The elaboration put forward here gives central prominence to and integrates our way of understanding the process of development of the *self*, based on the transmission of culture, which in turn is modulated by relations of identification that are revived in every new generation by the conception of the family. Psychoanalysis and classical cognitivism have largely shown the transformational and reconceptive potential of what is connected to the family and the culture, which however is proportionate to the degree of saturation-unsaturation of the psychoanthropological matrixes. Both extreme saturation and extreme unsaturation of the psyche are seen as bringing psychopathological degeneration. While in the first case the mental sphere is paralysed by the existential immobility laid down by family intentioning, in the second, it is dematerialised until it almost disappears under the shadow of the demolition of inner matrixes.
In this perspective, at the metapsychological level Subjective Group Analysis puts forward an explicatory paradigm where the *cultural-relational-family* elements at various levels become part of *a significant and signifying network* that is configured as an *authentic*

10 Think of a child held in one's arms, or of sexuality, or for instance, of some research carried out on animals which showed that even short periods of deprivation of the mother's presence have significant neuroendocrinal effects on the later capacity to react to stressful events.

identificationary pole star for the individual, who can find his own subjectivity only in ceaseless confrontation with the mental field of the family, seen as the vehicle for group thinking (Nucara, Menarini & Pontalti, 1987). This confrontation is mainly unconscious. Psychopathological symptoms have the role of preventing it while psychotherapy serves to facilitate it. In this sense the "healthy" personality is constructed both in continuity with the family's transgenerational past, in real relations and in the inner world, and in discontinuity, in the process of subjectivization and exploration that accompanies man throughout his life cycle. This network of signification enables the event to be transformed into an *invent* (Napolitani, 1987), that is, it makes it possible to acquire the appropriate mental tools to make sense of all the past, present and future culture of which the family, as well as the individual, is part. This concept of culture is therefore not to be seen in a sociological sense, but a something transpersonal. We will take this opportunity to underline the extraordinary importance, something we have not examined closely here, of *transgenerational* processes in the construction and development of psychic life and psychopathology. This issue has been studied in depth by modern psychoanalysis, family therapy and by group analysis itself. It has become necessary here to make an epistemological comment that shows how, despite the unitary mind-body relationship, in order to avoid confusion and misleading mistakes, it is necessary to study every level of the problem with suitable, specific models. The immune system must in fact be able to recognize the different from self (such as for example pathogenous agents), and to do so it must firstly know itself. The other than self for the body can be extraneous and dangerous (except obviously in situations of affective or erotic or nutritive exchange), while it is indispensable for psychic creation and development. It is the grafting on of other parts (Napolitani, 1987) through identification and learning that enable the child to become *human*. *Wild children*, as they have been carefully studied in the past, do not become adults if they have no human world to grow up in. It should be underlined that the clinical case cited above shows that there is an intentional drive on the part of the world where the child is born and that it somehow *in-sists* on him, guiding his developmental process. To this must be promptly added, before the first year of life, the experience of child-adult interindividuality, which is expressed in the concept of primary intersubjectivity (Trevarthen, 1979). This circumlocution which may sound like a philosophical sophism, actually describes very well the exact relational moment when the child feels recognised by the significant adult as a separate subject, and therefore as an individual. This in some respects is a sensorial fact, but also a psychic and cultural one (for instance, the mother's experiences, the mother, how the pregnant body is seen in the various cultures, nursing which begins in the ninth month of pregnancy, etc.).
In the final analysis, the therapeutic group, and the groupanalytical setting, precisely because it is *loaded* with visions, bodies and relations, seems to be a privileged place both for the observation of these problems (and also of the body as representation to the Self and to the Other person) and for grasping the great unifying value of Otherness and of difference that here become possible ways of therapy for pathologies that may be serious.

Conclusions

In our attempt to outline a meta-model, the epistemic-theoretical and methodological hypothesis put forward seems to us to be capable of *bringing together* the "body-brain-mental-culture" steps, which are very ambitious and quite advanced. After all, we repeat, we do not think there are single disciplines or scholars that can deal with such a broad spectrum. However, it seems to present, among other things, two methodological advantages of a non-reductionist kind.
The first is that of ruling out the idea that a single disciplinary area, through some epistemological imperialism or some fascinating mixture (such as sociobiological), can explain everything using a sole observation method. The second is that of avoiding the opposing forms of reductivism common in psychosomatics, which lead on the one hand to the reduction of the human being to a chemical body devoid of mind, history and experience, and on the other to the use of a naïve psychosomatics, which uses bare

pseudosymbolic explanations, without accounting for the steps and connections leading from the symbolic to the body and viceversa.
We would like to conclude by underlining that with the passing of time, despite the immensity of the task before us, we are more optimistic than before about the possibility of a relationship between cultural anthropology, groupanalytic psychotherapy and neuro-biological research. This is because, as has been underlined several times, the new clinical and epistemological approaches of the neurosciences seem to allow theoretical and operative connections through the visualisation of biological systems as facts interacting with experience. Moreover there is increasing awareness on the part of clinical-dynamic psychology that relating is something that cannot disregard the presence of the body, because it is here that human relations, starting from the mother-child relationship and from mutual attachment, *are incorporated* or *embodied* and viceversa.
Is everything clear then? In part, since if there exists one field where there are more things under heaven than psychology can invent, it is precisely the field we are dealing with here. It contains a core of fascination and mystery. Luckily, daily clinical experience with the mystery and fascination of psychopathology clearly shows us that psychic phenomena like hysteria and anorexia, but also organic pathologies, as well as relational, mental and somatic events can be connected (Giannone & Lo Verso, 1996), and this *allows* us the possibility of taking care of human suffering.

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