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Facing Up to the Embarrassment: The Practice of Subjectivity in Neuroscientific and Psychoanalytic Experience

Summary

The paper proposes a renewal of the problem-space in which the relation between psychoanalysis and the cognitive neurosciences is played out; this is in response to the persistent embarrassment or stand-off that characterizes current attempts at dialogue. The authors suggest going beyond classical conceptual oppositions, (mind-body, subject-object etc.), and beyond the seduction of the idea of some 'natural' conceptual translation between the two practices. A process of reciprocal 'transference' becomes central to creating the space in which the "mixed", (both biological and subjective), quality of our objects may be recognized and the pitfalls of reductionism be avoided. For psychoanalysis the hysteric was originally such a mixed or "quasi- object" in which psyche and soma were in a relation of reciprocal representation. On the other hand, the cognitive neurosciences' 'embodied-enactive' and neurophenomenological perspectives provide a philosophical framework for the place of subjectivity and interpretation in scientific work. This important epistemological shift in scientific thinking offers evocative conceptual tools (emergent processes, circular causality), which should transform the difficult dialogue between the neurosciences and psychoanalysis.

1. Psychoanalysis and Cognitive neurosciences: reframing the problem space

The question we address in this text is the needed renewal of the problem-space in which the relation between psychoanalytic practice and cognitive neuroscience is currently played out, which has amounted to little more than a persistent embarrassment or stand-off.

A reframing of this question is necessary if this embarrassment is to be confronted frontally, radically renewing a field of research, rather than a rehash of commonplace arguments leading to the impasses we know all too well. These arguments base themselves on "classical" conceptual oppositions, (mind/body, subject/object, inner/outer, "first" person/ third" person), which define and thereby contribute to the distribution of the field of objects into mutually exclusive categories, such as "natural", "biological", "social", "discursive".

In the received frame, the circulation of these objects is regulated by *regimes of causality* that are also traditionally opposed. For the natural sciences, it is purported to be a reductive, linear, logico-deductive causality, relating cause/effect series in order to create laws. Although psychoanalysis is also an interpretative praxis, in theory primacy is given to psychical causality and its accompanying

conceptualization, insofar as analysis treats the subject as produced and determined by his unconscious desires, by the trauma that inaugurates him as a sexual being. The process of symbolization in analysis situates the subject as a being in and of the order of language, with its attendant system of rules (substitution, displacement etc). Although these characterizations belong to a pervasive (and usually unthematized) discourse which is necessarily schematic, they incarnate the apparent incompatibility, and even the contradiction, between the natural or scientific, and the psychoanalytical modes of causality. The former produces a comprehensive understanding of phenomena, the latter defines the subject in terms of his singular position in the articulation of language and desire as it is actualized by his position *vis à vis* his libidinal objects .

If we are to see what kind of rapport we can have *beyond* this intrinsic “non-rapport” or incommensurable relation, we need a conceptual framework that, (at least provisionally, experimentally), circumvents these gaps or contradictions. This reframing must also safeguard us from falling into the semantic trap of construing the relevant objects of both disciplines as the “same” or comparable simply because one can find semantic descriptive notions that can be made roughly equivalent[1]. This is the trap of seduction by the idea of some sort of a “natural” conceptual translatability, perfect, because without remainder. This kind of slippage into literalness, or literal translation between domains, as has been seen by the efforts of others[2], actually renders sterile a potentially fruitful encounter before it even starts.

It is also true that the concepts constituting a field are renewed by metaphorical adjuncts imported by new language, fresh metaphors. The relation between two fields such as psychoanalysis and cognitive neuroscience might be reformulated as one of such reciprocal transference. Yet this *transference*, as between two languages in translation, is never without a remainder. Indeed, our project, far from attempting to move toward the literal by ignoring or effacing the remainder, may even reveal, in the end, that what resonates the most in this conceptual import-export is the remainder itself, (as supplement of meaning effect, even of “misreading”).

A new framework must comprise bridgeconcepts, passages, negotiations, which permit reciprocal transference of meaning through imaginary and poetic renewal, without foreclosing the specificity of each domain of praxis. The eventual worth of this relation *beyond* the “non-relation” has to be developed and questioned through practice, through clinical work, and in the practice of science as an exploration of human subjectivity carried out by scientists considered as desiring beings situated in specific socio-cultural contexts.

2. Making monsters: what is a quasi-object?

As Enlightenment thinkers, we separate, purify and oppose for the sake of clarity. What if we take a different path and mix, contaminate and merge for the sake of complexity ? This path leads us to the world of quasi-objects, which belong exclusively to neither the natural nor the social/subjective category of objects. The notion of the quasi-object is a bridge-notion insofar as it presupposes reciprocal or mutual co-determination between natural and social/subjective sources. The quasi-object or subject has *no* core, or “primary” determination:

Quasi-objects are in between and below the two poles [nature/society-subject], at the very place around which dualism and dialectics had turned endlessly without being able to come to terms with them. Quasi-objects are much more social, much more fabricated, much more collective than the “hard” parts of nature, but they are in no way arbitrary receptacles of a full-fledged society. On the other hand they are much more real, non-human and objective than those shapeless screens on which society-for unknown reasons- needed to be “projected”[3].

Moreover, we are not obligated to create these hybrid objects for the occasion: as Bruno Latour well articulates, the work of production of hybrid or quasi-subjects and objects is always already in practice in the unthinkable space between the two poles of the nature/subject-society dualism. They are, in fact, the inexorable *effect* of this very dualism[4]. It is therefore not a question of forging, but one of developing the

capacity to recognize and interpret these elusive, undecidable, chimerical monsters, and then cultivating the working spaces to keep them in full view.

Viewed as a trope, the quasi-object functions as an oxymoron, in which “opposing” pairs, (mind/matter, subject/object, culture/nature, experiential/biological), are yoked together in the ambivalent tension of mutual codetermination. The field of psychoanalysis has one such quasi-object at its very origins: the hysteric, who was already a well-known theory-generating figure for the fields of psychology and medicine. The early evolution of psychoanalytic experimentation and theory used the hysterical patient as object and figurative site to develop a theory of representation that articulated psyche and soma in a relation of reciprocal representation. Produced by a rupture with psycho-physical determinism, the theory of psycho-physical representation both used and produced a subject that was a mixed entity, a social-natural hybrid. This hybrid figure was inaugural to Freud’s invention of a theory of modern subjectivity that was anchored in the original mind/body articulation, but that left the body in reserve, as a horizon or a *point de fuite*[5]. As many have suggested, Freud replaced the first theory of psycho-physical representation with sexuality, another possible passageway between psyche and soma, in the invention of a subjectivity “rooted in the body, and yet different from it”[6]. The erogenous body would then be the next site for subject-generation, a body in the *entre-deux* of the psychical and the organic.

Another, more contemporary psychoanalytic hybrid might be the Lacanian vision of the psychoanalytic subject (the subject of the unconscious) as being co-determined, on the one hand by the autonomous combinatory matrix of language, on the other by his position in terms of the object-cause of his desire (*jouissance*). This apparently paradoxical hybrid may be seen to generate the evolution of Lacan’s thinking on discourse theory[7].

3. Multiplicity of discourse in cognitive neurosciences

3.1 Enaction and non-representational cognition

The foregoing remarks are needed as the conceptual prelude for a reappraisal of the transference process between the psychoanalytic subject and what can be seen as its biological “roots”. In fact, “bridge” theories towards the cognitive neurosciences have become active and interesting only in recent years[8]. For an adequate reading of these recent efforts it is essential to keep in mind that they are written in a fluid, diversified scientific field of the cognitive sciences, and the cognitive *neurosciences* in particular. This contemporary diversity can be loosely organized in three principal orientations: cognitivist, connectionist, and embodied-enactive[9].

It is this last, most recent *enactivist* perspective that interests us here insofar as it appears to us to provide the most fruitful research and philosophical framework that accounts for the “mixedness” of its biological/mental quasi-object. Enaction has been developed over the years as an alternative view to cognition based on minds as abstract symbolic systems, whose fundamental constitutive mode is that of a mental representation as a semantic-like correspondence with the world. In contrast, enaction is based on situated, embodied agents, whose world of significance *emerges* along their active living (?), not as a representation system, but as constrained imagination, (which the name enaction evokes). More precisely its core theses are twofold: (a) On the one hand, the ongoing *coupling* of the cognitive agent, a permanent coping that is fundamentally an active embracing of the world in order to in-form it with sense, not a passive reception of it (mostly mediated by sensori-motor cycles). (b) On the other hand, the *autonomous* nature of the cognitive agent understood as an self-produced identity providing a concern (?) or perspective, an ongoing endogenous activity that it configures into meaningful world items in an unceasing flow. This identity is at the same time natural, since it is based on endogenous configurations (or self-organizing patterns) of complex bodily/neural activity, yet is also in direct line to subjectivity as has been articulated by Jonas[10].

3.2 Emergence and non-linear dynamics

Enaction, as a concrete research perspective studies mental acts as emerging from the concurrent participation of several functionally distinct and topographically distributed regions of the brain and their sensori-motor embodiment. It is the complex task of relating and integrating these different components that is at the root of the arising of a distinct yet inseparable higher-level, coherent center that can be called an identity, a cognitive self.

Such a view in current scientific research is only possible because is rooted in the tools derived from the modern tools referred to as *non-linear dynamics*, (also referred to as complexity or chaos theory, emergent or self-organizing processes). This dynamical turn stands in stark contrast to the cognitivist tradition that finds its natural expression in syntactic information-processing models. The constellation of these notions represents one of the most essential mutation in science since Freud's time, and they are called to play an essential role in retelling the narratives that reveal the subject in quasi-object existence[11]. Since these ideas are a central part of the transference between science and psychoanalysis, a brief evocation is in order, even if it is sketchy.

Non-linear dynamics has revolutionized the entire framework of modern science in all domains by providing a new vision of causality : a consequence arises from a *network of multiple causes*, rather than a linear single cause. In contrast to the dominant computer (or hydraulic) metaphors in vogue for the study of organisms, in complex dynamics the quest is to discover how the simple constituents can lead to a *global* (or higher level) emergence. This global emergence has a clear mode or existence (an identity of some kind) but it cannot be localized or situated except in its dynamic transience. The scientific work has been to give (mathematical and empirical) substance to this intuitive notion that the whole is more than the sum of the parts; research seeks to spell out the how of this emergent surplus. The core principle is the same: the passage from the local to the global. In the case that concerns us this points directly to a codetermination of neural elements and a global cognitive subject, which belongs to an emergent level and has that mode of existence[12].

Now the principle of emergence is normally interpreted with a rather reductionist twist. That is, many will accept that the self is an emergent property arising from a neural/bodily base. However the *reverse* statement is typically missed: If the neural components and dynamics act as local agents that can give rise to a self, then it follows that this global level, the self, has direct *efficacious actions* over the local components. It's a two-way street: the local components give rise to this emergent mind, but, vice versa, the emergent mind constrains, affects directly these local components. Research provides many examples of this functioning on a somatic level[13].

Furthermore, the multiplicity of non-linear causes brings to its full force the realization that a cognitive subject is not a single-locus, isolated process. It can only operate in its extended network of action, most clearly in human intersubjective circulation. An agent is thus a distributed pattern that can only be singular in its social dissemination. Current scientific research concentrates its work on intersubjective enaction from the study of early infancy, as well as imitation throughout the primate groups. Enaction must thus be seen as extending into the phenomena of the transference.

3.3. The renewal of consciousness studies

This sketch of the multiplicity of discourse in cognitive neuroscience would be seriously incomplete with an added dimension. The enactive-embodied orientation for cognitive science has developed in tandem with the renewal of interest in a scientific study of *consciousness* within science itself[14]. The word serves as a highly polysemic marker for a renewal of interest in tearing down the scientific taboo concerning the pertinence of the study of mind for humans as lived experience, as singular existences. This consciousness renewal includes a vast array of options from the most reductionist views to taking first- person approaches

seriously. Clearly when we speak here of “first-person” (lived or subjective experience) in the scientific context, we are referring to a truly “extended family” of material that is far from homogenous, embracing first-person accounts qua verbal reports, phenomenological reduction, and, possibly, the inexhaustible inventions of the psychoanalytic clinic, such as all the dimensions (transference, resistance) that compose the “enactment” of the transference neurosis.

For our discussion here, then, it is importance to have in view this recent movement in science, which leads directly to the realization that the work of subjectivity is always already at the heart of science; this is a far cry from the received view that science does not envision a subject except in its “sutured” form[15], although this is not necessarily conceived as the psychoanalytic subject of the unconscious. This is explicitly the case for the research program of neurophenomenology[16] where a distinctive role is claimed for first-person accounts (lived, subjective experience). The main thesis is that these two domains of analysis, neural emergence and lived experience, co-exist in a relation of reciprocal co-determination, or *mutual constraint*, making mixed nature the focal point. This notion of mutual constraint can be said to reveal two levels of the work of subjectivity in the science context. First, an “apparent” level, which constitutes a substantial part of our project here, one on which material traditionally considered to be subjective and thus invalid for scientific use is included. Second, a level that is, strangely enough, less widely or easily accepted, where subjectivity reveals itself as being at work in the practice of science itself. The scientist at work is not master in his own house: the progress of his experience is regulated, often in spite of himself, by processes of language[17].

Thus both ends make the transit on both sides of the quasi object apparent and visible. To be restrained to only one would be limping...

4. Pragmatics of circulation: emergent dynamics and mutual constraint

We have briefly seen how a dynamical principle can make (scientific) sense of the emergence of a cognitive subject which serves as a place-marker for both “upwards” and “downwards” causal effects which, within in a network of transference intersubjectivity are in a relation of reciprocity. Moreover, if we take the idea of the mixed object seriously, we might see how this new space embraces both ends of an emerging subjectivity, and in so doing invalidates the very notion of a “direction”, effacing in the same stroke our tenacious Cartesian topology. This notion of the quasi- subject has helped us to jettison the received, “dualistic” framework and to retrieve the epistemological complexity of the objects that concern us. It is certainly an exercise of tolerance to admit the co-existence of terms that ordinarily are mutually exclusive. Freud’s upsetting of dualistic or oppositional mind-body categories, it has been suggested, caused more hostility to psychoanalysis than did the notion of pansexualism, the more popularly admitted culprit[18]. Like poetic devices such as the oxymoron, metaphor or syllepse, these odd couplings (of orders of signification, of reality) are properly scandalous. But it is perhaps through maintaining the tension of paradox that we can come to a clearer notion of what kind of circulation, (however ontologically threatening), is at the heart of these mixed objects, which are *concurrently* natural, social and discursive.

Classical scientific causality is a unidirectional, “upwards” causality, according to which the bodily or somatic source affects the mind or subjectivity, considered as epiphenomenal. This view is clearly incompatible with the co-determination called for by our mixed objects. Emergent processes are networks of causality: these networks are constituted by a dissemination of causes and effects, which brings forth manifestations that cannot be reduced to any single cause. They are the sites of rich, multifarious manifestations, for which apparent chaos does not contradict the existence of causality (of a new kind).

Now, simply “adding on” a downwards causality delineating the influence of the social or collective, symbolic or linguistic fields does not do justice to our mixed object either. Psychoanalysis construes a subject that is related to the body and to the world, and yet different. We have already suggested how the notion of the quasi-object (not named as such) has always already belonged to the field of psychoanalysis. To the extent that emergent dynamics dissolves two more classically defined scientific oppositions: linear

causality and complexity; determinism and chance, this notion also appears as already having something to do (in the sense of being obviously evocative) with our experience of the workings of the psyche.

In the analytic setting we experience the ego self (the “I”) as an imaginary architecture, a crystallization of self-images more or less coherent, in a more or less stable equilibrium. It is this illusion of stability that confers both its force and its fragility to the house of the “I”. Contrast this to the “subject” of the unconscious, a “distributed” (deferred, decentered) subject, manifesting by eruptions, surprises, by appearances that are, by definition, unanticipated. Non-unified, the “consistency” of this subject is the very process of its impulsive advent, in how it arises, occurs, in what we might call a stable disequilibrium. Repulsed by the ego, barred from consciousness, this subject is fugitive, evanescent, fleeting, and the transience of its manifestations stands in contrast to the extraordinary resiliency, the unmitigated permanence and timelessness of the unconscious material. Antithesis: its transience, the spontaneous surprise of its appearances allows us to glimpse it as emerging from a disseminated field of causal networks; but then, on the contrary, its perpetuity and mode of appearance evoke a structural disposition making it possible to speak of rules of constitution. The dynamics of the unconscious allows us to perceive it as a rule-based system of transformations (metaphor, metonymy). Emergence reappears here as the immediacy of an *après-coup*. But we are then forced to move further, well beyond the rule-symbol context, since the unconscious material is forged from the very substance of language, in the very material of the signifiers, where sense, sound and shape are all at once in play (anagram, paragram, logogriffe). At this level of the combinatory matrix the rule-based or “computational” logic must cede to another causality, that of the “*calcul de l’inconscient*”[19]. This unconscious dynamics owes its singular, transitory and yet insistent mode of appearance to its roots in the disseminated network where body and signifier, causality and chance coincide.

This view of a subject proceeding from an unconscious dynamics understood as emergent dynamics attempts to place it in the framework of the quasi-object/subject. Irreducible to neural or simple components, it participates in an oxymoron or aporia for which it cannot be a question of reduction or isolation of “primary” vs. “secondary” or epiphenomenal qualities. What is important for us now is to see how this reframing resonates with the various experiences of the subject in practice.

5. Interpretation: words and bodies

To suspend this text on an evocation of interpretation for the psychoanalytic experience is intended to elicit fresh questions as it continues the “vis à vis” elicited by our quasi subject/object. Although this is not the place to review the subtleties of positions on interpretation, we note in passing that many variants in theory and practice participate, in a kind of *mise en abyme* within the psychoanalytic field, in the same pitfalls of classical scientific causality that we have been trying to surmount in our reframing of the problem space. Many interpretations in practice are propped or supported by a covert linear causality, which relegates their activity and effects to the imaginary register, effectively screening out emergencies of the unconscious. Interpretations informed by theoretical dogma, and certain types of “constructions” confiscate the unconscious of the analysand, promoting dependency or what has been called a “*relation d’interprétation*” between analyst and analysand[20]. This has the effect of saving the analyst from having to “pay with his person”[21] by preserving him in the imaginary reserve of theoretical doctrine, where he is safeguarded from the hazards of the transference.

Indeed, both analysand and analyst must pay with their words and with their persons: when the analyst “pays” with his words and with his person, this means he must endure the expropriating effects on his words (in the interpretation), and on his person (in his situation as stand-in for the Other); when the analysand submits himself to the rule of free association he is exposing himself to the risk that the progressive dismantling of a world and body of representations entails. The transference, then, as the place of enactment of this expropriation or decentering is thus an ambiguous scene *par excellence*, and as such, generates equivocity. As interpretative space, it is certainly a subjective intimacy; yet it is not a question there of *subjective experience*, but rather of the *transferential unconscious*, a “*champ flottant*” :

Le mot “flottant” désigne un type particulier de distribution du signifiant...un...ensemble qui comprend à la fois ces mots et les chaînes d’association qu’ils suscitent de la part de l’analysant et de l’analyste. Chacun des signifiants qui lui appartient est une entité distincte, mais aussi, il tient repliés en lui-même une quantité d’autres signifiants que le travail d’association déploie simultanément. Autant de mots qui peuvent figurer dans x chaînes d’associations. Un espace où chaque point en contient une infinité d’autres n’est pas de type cartésien. Qu’on y plonge un objet ici le récit de rêve –, de linéaire qu’il était, non seulement il se feuillette, se démultiplie, mais chacun de ces éléments est à la fois ici et partout ailleurs[22].

This is a mixed space, invented and shared by the words, (unfolding associative chains), and bodies, (changes in muscle-tone, visceral activity, bodily indicators of drives), of both analysand and analyst. It is a space that is intrinsically non-linear; in which subjects are simultaneously decentered and embodied.

If, in effect, the only validation for an interpretation comes *après-coup*, as a “transferential validation” actualized by the stemming of repetition, is it nonetheless possible that the *justesse* of an interpretation indicates this paradoxical (embodied/decentered) consistency of the transferential space?[23] We would suggest that the interpretation corresponds to an emergent property issuing from the space of the transference conceived as a “nexus of bodily and psychical forces”, to borrow Butler’s[24] reformulation of the speech act[25]. The interpretation “works” (*Deutungsarbeit*, but also *justesse*) when its formulation has both the performative force or impetus of the utterance construed as a bodily act and the “ambiguity of agency” corresponding to the decentering of the subject in the transferential field[26].

This view of the interpretive act as an efficacious formulation emerging from and acting on the “mixed” context of the transference must certainly be developed. Here it serves only as an example of the kind of zones of thinking that could allow us to sustain the listening process between psychoanalysis and the neurosciences. Another (obviously related) such zone is that of psychical reality and the fantasy, viewed as “*mode corporel de traiter le réel*”[27]. The construction and consistency of fantasy in psychoanalysis should be put face to face with the neurophenomenological conception of the functioning of the imagination (mental imagery, memory), for which the distinction between perception (and its empirical roots) and imagination (and its sense-giving ramifications) are in active overlap. Transference, fantasy, and interpretation are but three (albeit “loaded”) examples of areas of psychoanalytic thinking that could be presented (in their various aspects) in the particular encounter we are attempting to initiate here. And there are certainly spaces in related areas where the encounter is already happening in its own fashion[28].

6. Conclusion: “Il n’y a pas de rapport”

Analytic experience empties us of the assumption that when the other speaks, we know what he or she means. We never simply presume we are speaking the same language. Neither do we, here, aim at presupposing or constructing a “common” language that would operate for both of our domains. Rather, this experience, like that of translation, is one of deference, or perhaps we should say, of diplomacy. This deference allows us to select the signifiers of the other and to dialectize them in order to (1) dislodge imaginary conflicts (i.e. such as that of “territory”); (2) most important, to *subjectify* or render proper the term, idea, intuition that is “taken” from the other and make it to grow in the furrows of our own field.

In this sense, co-determination, or mutual constraints translates, in our terms, into inter-pretation: a *putting into relation* of disparate fields; a *process of subjectification*, of “making ones own” of what one takes from the other; a *deferent transference* or grafting function that is key to the ongoing, progressive, lively generation of signification in the respective languages of psychoanalysis and a certain vision of cognitive neuroscience.

This deference also amounts, paradoxically, to the very deferral of a relationship. In effect, past attempts at creating a grand synthesis between psychoanalysis and the cognitive neurosciences have inevitable concluded with (albeit polite) *constats d’échec*[29]. Our position, as we hope to have communicated it,

resolutely attempts to defer this sort of synthesis, to sustain the tension of the question, or the *non-rapport*, and suspend the moment of conclusion. We do, of course, start from the position that psychoanalysis and neuroscience cannot and should not turn their backs on one another. Our essay, however, depends upon an attenuation of the question, and on the notion that, whatever the outcome of such intercourse, the process risks to be a transformative one.

Notes:

[1] André Green, *La causalité psychique, entre nature et culture* (Paris: Odile Jacob, 1995).

[2] By Eric Kandel, “Biology and the future of psychoanalysis: a new intellectual framework for psychiatry revisited”, *Am.J.Psychiatry*, vol. 156, 1999, pp. 505-524. J. Hochmann & Marc Jeannerod, *Esprit, où es tu?* (Paris: Odile Jacob, 1991). Kenneth Mark Colby & Robert J. Stoller, *Cognitive science and psychoanalysis* (Hillsdale New Jersey :The Analytic Press, 1988).

[3] Bruno Latour, *We have never been modern* (Cambridge, Massachusetts: Harvard University Press, 1993). [Original French edition: *Nous n’avons jamais été modernes Essais d’anthropologie symétrique* (Paris: La Découverte, 1991) p.55.]

[4] Latour, *ibidem* [French edition, p. 40].

[5] Dianne F. Sadoff, *Sciences of the flesh, Representing body and subject in psychoanalysis* (Stanford: Stanford University Press, 1998). Monique David-Ménard, *L’Hystérique entre Freud et Lacan. Corps et langage en psychanalyse* (Paris: Editions Universitaires, 1983).

[6] Sadoff, *op.cit.*, pp.15-16. Many authors have considered the homosexual as the exemplary contemporary hybrid—“naturalized” by essentialist theory and “constructed” by psycho-social theory. See Leo Bersani, *Homos* (Cambridge, Massachusetts:Harvard University Press, 1995) for a sophisticated discussion related to this idea.

[7] A point proposed by Bruce Fink, *The Lacanian Subject, Between Language and Jouissance* (Princeton New Jersey: Princeton University Press, 1995).

[8] Perhaps the most striking example is the recent article by the eminent neuroscientist Eric Kandel, *op.cit.* From the psychoanalytic camp, see Lawrence D.S Olds & A.M. Cooper (1997). “Dialogue with other sciences: Opportunities for mutual gain”, *Int. J. Psychoanal.*, 78, 219-225.

[9] Cf. Francisco Varela, *Invitation aux sciences cognitives* (Paris: Seuil Point Sciences, 1992); Francisco Varela, Evan Thompson, Eleanor Rosch, *The Embodied mind: Cognitive science and human experience* (Cambridge, Mass.: MIT Press 1991); Andy Clark, *Being There. Putting the body and the mind together again* (Cambridge: MIT Press, 1997).

[10] Hans Jonas, *The phenomenon of life* (Chicago and London: The University of Chicago Press, 1996).

[11] For more on this see e.g. S. Ayers, “The application of chaos theory to Psychology”, *Theory & Psychology* 7 (3), 1997, pp. 373-398; E.A. Levenson, “The uses of disorder. Chaos theory and psychoanalysis”, *Contemp. Psychoanalysis* 30, 1994, (1) 5-24.

[12] For this minimal notion of a subject see the recent discussion by Shaun Gallagher, Philosophical concepts of the self: implications for cognitive science. *Trends in Cognitive Science*, vol. 4, No. 1 (34), 1000, pp. 14-21.

[13] Meaning research in such fields as neurosciences and immunology. Also “psychosomatic” research. On a more intimate level of clinical experience we all have examples of analysands in whom we have intuitively supposed the effects of unconscious processes on the triggering or evolution of an illness, or on the variations in immune-system functioning- even if this isn’t properly “scientific” data.

[14] For an excellent indicator of this movement, see the program for the popular meeting *Towards a science of consciousness*, TUCSON IV, April 2000, <https://www.consciousness.arizona.edu/conference/index.html>.

[15] Francisco J. Varela & Jonathan Shear, eds., *The view from within. First-person approaches to the study of consciousness* (UK/USA: Imprint Academic, 1999)..

[16] Varela (1996). “Neurophenomenology: A methodological remedy for the hard problem”, *J. Consc. Stud.*, vol. 3, pp.330-350.

[17] See Evelyn Fox Keller, *Refiguring Life-Metaphors of Twentieth-Century Biology* (New York:Columbia University Press, 1995) for development of this point.

[18] Cf. Antoine Vergote (Katholieke Universiteit Leuven), “Husserl et Freud sur le corps psychique de l’action” (unpublished manuscript).

[19] We owe this expression to René Major.

[20] René Major, Le procès logique de l’interprétation, *Comment l’interprétation vient au psychanalyste* (Paris: Aubier- Montaigne, 1977), p.44.

[21] Jacques Lacan, *Écrits* (Paris: Éditions du Seuil, 1966), p.587.

[22] Michelle Montrelay, “Lieux et génies”, *Cahiers Confrontation* (Paris: Aubier-Montaigne, 1983), pp. 118-119.

[23] Formulating the space of interpretation in these “quasi-object” terms clearly does not dispense us from the fundamental impossibility or aporia consisting in the objectification of that which, by definition, emerges from subjective division or decentering [see Joel Dor, *L’A-scientificité de la psychanalyse II. La Paradoxalité instauratrice* (Paris: Editions Universitaires, 1988, p.147)].

[24] Judith Butler, *Excitable speech. A Politics of the Performative* (New York and London: Routledge, 1997), p.141.

[25] This goes along with notion of transference as “enactment” or “enaction”. An inventive activity and not an epiphenomenal version of a deeper, underlying meaning “waiting” to be revealed.

[26] Here we take our cue from Butler’s reading of J. Derrida’s reformulation of the Austinian performative “with” Soshana Felman, *Le scandale du corps parlant. Don Juan avec Austin ou La séduction en deux langues* (Paris: Éditions du Seuil, 1980).

[27] Juan-David Nasio, *L’inconscient à venir*, (Paris: Christian Bourgois, 1980) p.83.

[28] See, for example, Mario Edoardo Costa Perreira, text for Les États-généraux (www.psychanalyse.refer.org/call971b/texte88.html), for an example of this meeting in the context of the re-editing of the DSM IV.

[29] Colby and Stoller, *op.cit.*; Hochmann and Jeannerod, *op.cit.*; Jean-Pierre Changeux & Paul Ricoeur, *La nature et la règle* (Paris: Odile Jacob, 1998).