

## ***TRAUMA AS AN ENCOUNTER WITH THE REAL***

On which a subject cannot anticipate

**Abstract:** Starting from an explicitation of anticipation as a dynamic movement that takes place between living systems and their environments and that is (i) a symbolic process; (ii) motivated by a search for satisfaction; (iii) a social movement, we will question the limits of anticipation. In this questioning Lacan's orders of the imaginary, the symbolic and the real are central concepts that lead to an elaboration of the relationship between the real, trauma and anticipation. In a first step, we will briefly discuss the notion of trauma in the oeuvre of Freud and Lacan. In a second step, we will oppose trauma and the lacanian notion of the phantasm. On the one hand, this leads to a brief elaboration on trauma as the origin of the coming into being of the subject and on the other hand, this permits a characterization of trauma as an encounter with the real on which a subject cannot anticipate.

**Keywords:** anticipation, psychic systems, real-symbolic-imaginary, trauma

### **1. Introduction**

#### 1.1 Anticipation

In our paper "Anticipation, Memory and Attention in the early works of Freud" (Knockaert et.al., 2002a) we argued that psychoanalysis can offer fruitful insights for a dynamical approach of anticipatory systems. An approach in which anticipation is considered as a dynamic movement that takes place between living systems and their environments and that opens the possibility for each of the participants in the movement to be changed by it (Van de Vijver, 1998: 36). In an interaction of this kind: "(...) the goal(s) even if it is recognizable *aposteriori* and *globally*, is never fully driving the behaviour *apriori* and *locally*" (Ibid.: 36).

This definition of anticipation differs from Rosen's definition, who states that: "An anticipatory system is a system containing a predictive model of itself and/or of its environment which allows it to change state at an instant in accord with the model's prediction pertaining to a later instant" (Rosen, 1985: 339). In contrast with Rosen, we refuse to think of living systems and environments as separable entities. The notion of what an environment is cannot be separated from what living systems are and what they do. One could say that there is no independent environment; independent of the living system that is, in the same way as there is no living system without an environment. Systems and environments relate to each other through a mutual specification or codetermination. They are joined together in multiple ways and what constitutes them is the product of their history of structural coupling (Knockaert, 2002b: 554).

It is in this sense that we have to grasp that the goals of anticipation are not explicitated in advance although they do drive the behaviour of the system in

anticipation. The anticipation we want to deal with in this lecture is not predictable; the goals that drive anticipation are built during the movement and can only be identified in retroactive manner (Knockaert et.all., 2002a: 243).

## 1.2 Freud's Project

The kind of living systems psychoanalysis is interested in are psychic systems. In "Anticipation, Memory and Attention in the Early Works of Freud" we focussed on Freud's conception of the psyche as he elaborated it in his *Project for a Scientific Psychology* (1950a [1895]). In a first step we learned there how a psychic system, or stated differently, a subject that is part of a linguistic social bond, is initially constituted within an anticipatory movement involving another human being.

On the one side of the interaction we distinguished a helpless human infant, a reflex-driven organism incapable of seeing to its own needs, a rudiment of a system to which we cannot attribute any anticipatory capacity in the strict sense, since it lacks a developed memory system and the capacity for abstraction (Knockaert et.all., 2002a: 247). This pre-subject as it were is nevertheless actively engaged in an anticipation as a result of its *traumatic* confrontation with excitation originating in its own body, drives it cannot escape from but that do force him to cry out to the external world. On the other side of the interaction we distinguished a fellow human being, an adult that pulls the infant further in the anticipatory movement by interpreting its cry as a specific need, thus as communication. In a certain sense, the adult interprets the child's cry as language and thus anticipates on the infant as a subject of a linguistic social bond (Ibid.: 243). Through this interpretation, the adult determines in retroactive manner the goal of the anticipatory movement of the infant – for example the need to be fed.

As a consequence the identity of the infant is changed. On the one hand, the anticipation structures its memory. It leaves residues, traces in its memory that will start functioning as imperative motives. When the infant is once again confronted with a certain need a state of wishful activation arises that will result in an attraction towards the mnemonic image of the object that once offered satisfaction – for example the breast of the mother. Stated differently, the infant will anticipate on this object, it will search a repetition of the once experienced satisfaction. On the other hand the anticipatory movement that constitutes the subject also constitutes its environment, that is, an interpreting/intervening other: another human being that holds the (symbolic) interpretation of its needs.

A further analysis of the secondary thought processes that Freud describes in his *Project* showed us in a second step how "the anticipatory capacity of the psychical system is mediated on the one hand by a dynamic between the three main subsystems of the psychical system: perception, memory and consciousness and on the other hand by a dynamic between the system and its environment, more specifically a fellow human being. These dynamics are always governed by the tendency to attain pleasure and to avoid unpleasure. Further it is clear that anticipatory movements of a psychical system always imply, next to memory and a capacity for abstraction a wishful activation and a related state of expectancy. In the anticipatory movement the ego and the attention mechanism play a central role. And a general state of anticipation is made possible by speech-association. In this association the fellow human being is ones again of considerable importance" (Knockaert et.all., 2002a: 251).

For now, we just want to highlight three points since we will elaborate them throughout our lecture of today. Firstly, anticipation shows to be a movement that involves language, or stated differently, anticipation is a Symbolic process; Secondly, anticipation reveals to be the way in which a subject assures the satisfaction of its drives, it is a search for pleasure and an avoidance of pain; Thirdly, anticipation always involves an other human being and is in that sense a social movement.

### 1.3 Lacan's Real, Symbolic and Imaginary Order

In our present lecture, we would like to question the limits of anticipation. In this questioning Lacan's return to Freud will be a fundamental source of inspiration. In this return the orders of the imaginary, the symbolic and the real play a crucial role. Lacan developed these orders, according to which all psychoanalytic phenomena may be described, throughout his entire oeuvre what makes it hard for us to provide a clear and simple definition of them. In a broad, general sense we can consider the imaginary as the realm of image and imagination, deception and lure with as principal illusions wholeness, synthesis, autonomy, duality and similarity. In that sense, it is the order of surface appearances, which are deceptive, observable phenomena that hide underlying structure (Evans, 1996: 82-83). The symbolic is essentially a linguistic dimension. The symbolic dimension of language is the signifier. It is considered as the realm of radical alterity, which Lacan refers to as the Other but also as the realm of the Law, which regulates desire in the Oedipus complex (Ibid.: 201-202). The real is in essence situated beyond the symbolic, it is considered as that which is outside language and inassimilable to symbolisation. In that sense it is linked with the concept of impossibility. The real is the impossible "because it is impossible to imagine, impossible to integrate into the symbolic order, and impossible to attain in any way" (Ibid.: 160). Because of this impossibility the real has a *traumatic* character for a subject. It is in a certain sense the object of anxiety. Lacan describes it as follows in his second seminar: "the essential object which isn't an object any longer, but this something faced with which all words cease and all categories fail, the object of anxiety par excellence" (Lacan, 1988[1954-55]: 164).

It is the relation between the real, trauma and anticipation that we will develop today. In a first step, we give a schematic outline of the development of the notion trauma in the works of Freud and Lacan. In a second step, we position trauma at the origin of the coming into being of the subject. In a third step, we develop how trauma can be understood as an encounter with the real on which a subject cannot anticipate.

## 2. Trauma

### 2.1 Freud and Trauma

Historically, trauma is a fundamental concept for psychoanalysis. In Freud's initial theory of the neuroses, traumata are crucial etiological factors. As early as 1893, in his text "Some Points for a Comparative Study of Organic and Hysterical Motor Paralysis" (1893c), he isolated a traumatic event as an etiologic agent in hysteria, more particular in hysterical paralysis. The latter consists of the inaccessibility of the representation of an organ for the associations of the subject. This inaccessibility was

attributed to the fixation of this idea within an unconscious association with the memory of a trauma, or to quote Freud directly: “to suppose that the lesion in hysterical paralysis consists in nothing other than the inaccessibility of the organ or function concerned to the associations of the conscious ego; that this purely functional alteration is caused by the fixation of this conception in a subconscious association with the memory of the trauma” (Freud, 1893c: 172)

A central aspect in Freud’s view on trauma is that of its deferred action or *nachträglichkeit*, distinguished for the first time in the case study of Emmy von N (Freud, 1950a[1895], 352-359). This view introduces a temporal dimension in the way in which an event exerts a traumatic effect on a subject. In one instance an event takes place, which is subsequently forgotten, but at the same time leaves a trace, a mark of which the subject ignores the implications. In the second instance, the first one is awakened and a pathological defence is provoked. This second moment confirms the fixation to the traumatic accident: the trauma displays itself to the subject as an actual, urgent task, a breakthrough of excitation that cannot be suppressed nor assimilated, and therefore attracts a lot of energy (Freud, 1916-17; 275). This energetic, economic accent is of great importance to Freud: certain events become traumatic for a subject because they produce to large quantities of excitations for the binding capacities of the psychical apparatus.

Freud initially qualified trauma as being of a sexual nature, at first interpreted as a confrontation with the seduction of an adult. The seduction theory was abandoned quite early, in 1897 to be precise. At that time Freud discovered the importance of oedipal, incestuous fantasies in the field of the neuroses through his self-analysis (Freud, 1892-1899: 259-260). Nevertheless trauma remained an important question for Freud, a question that is always related to another question, that of the origin of neurosis.

After the abandonment of the seduction theory Freud conceptualised the sexual nature of trauma in a different way, that is as a confrontation with certain aspects of the drives. In a first step Freud characterizes the drives as inherently traumatising, as instances that overwhelm a subject. Again we can notice the emphasis on the passive position of the subject: the subject cannot process the drives actively; it is overwhelmed by them and left without any recourse. The difference with his earlier conceptions lies in the internal source of the trauma that is pointed at here. From 1920 onwards, when Freud in “Beyond the Pleasure Principle” (1920g) introduces the death drive and the compulsion to repeat, the notion of trauma becomes even more complex: from now on it is not only characterized by the sexual dimension, the drives, but also by death.

In a second step Freud rearticulates the relation between the drives and trauma in his “New introductory lectures on Psycho-analysis” (1933a[1932]). There Freud refutes the idea of the inherently traumatising drive. He states that it are not the drives in itself that are traumatic but rather the fact that they encounter obstacles that make their satisfaction impossible. Anxiety for example arises when a child perceives that his libidinal demands are in conflict with the demands of the Other, more specifically the paternal Other (Soler, 1997: 48). So drives are only traumatic when they are in danger to remain unsatisfied, only then they provoke anxiety and repression.

Two important elements should be distinguished here: 1) the positioning of the trauma as the cause of the development of a neurosis and by extension of the coming into being of the subject, 2) the characterization of trauma through the registers of sexuality and death. These two elements are also at the centre of Lacan’s return to

Freud. In Lacan's work, death and sexuality appear as two manifestations of a lack. Death is positioned as the lack that characterizes the beginning of human life: since human beings reproduce in a sexualised way, origin itself immediately introduces the ending of life. Thus, the link between sexuality and death becomes clear at once. This relationship reappears in the instance of the drive as a border concept between the psychic and the somatic, which represents sexuality and death in the unconscious. Death and sexuality appear as issues which resist symbolisation and against which a subject can only create a narrative, a chain of signifiers that more or less protect it from a confrontation with these dimensions of the traumatic real.

## 2.2 Lacan and Trauma

As in the works of Freud, the conceptualisation of trauma in the oeuvre of Lacan changed during the years. Christian Demoulin distinguishes four periods in Lacan's theory that can help us grasp the developments in the meaning of trauma (Demoulin, 1997: 26-28).

In a first period, Lacan addresses trauma as a reality. In "Les Complexes Familiaux Dans la Formation de L'Individu" (1984[1938]) he makes an inventory of trauma's each individual is supposed to encounter in his development and that constitute the fundament of consecutive complexes: the trauma of birth, the trauma of weaning, the trauma of the fraternal intrusion and the oedipal trauma. Starting with weaning these traumas's lead to a dialectic solution through an intervention of the symbolic. The several ruptures that the traumas install have to be symbolised by the subject. When this symbolisation fails psychopathologies of different kinds ensue.

In a second period Lacan highlights the imaginary character of trauma through a reading of Freud's case study of the Wolf man (1918b[1914]). A central feature of this case study is a primitive scene that keeps haunting the subject in analysis. In this primitive scene the Wolf man is terrified by *an image* that shows seven wolves in a tree that fixate him with their gaze. In his analysis of this case Lacan accentuates the break-in of the imaginary in reference to the ethological notion of imprint that is responsible for the deferred traumatic effect of the scene (Lacan, 1975[1953-54]: 214). The imaginary fixations are traumatic because they couldn't be assimilated in a symbolic development.

In a third period, in his text "The Agency of the Letter in the Unconscious or Reason since Freud" (1977[1957]) and his fifth seminar *Les Formations de L'Inconscient* (1998[1957-1958]), Lacan no longer valorises the primitive scene as an image but rather as a signifier. He promotes the idea of an enigmatic signifier of the sexual trauma. Trauma is thus characterized as a symbolic phenomenon in this period.

In a fourth and last period, starting in the 1960, trauma is related to the opacity of the desire of the Other that leaves a subject without any recourse. The subject is helpless here because there is no signifier for this lack in the Other. In this sense trauma becomes an encounter with the real, that which lies beyond the symbolic. Lacan further develops this in his 11<sup>th</sup> seminar *The Four Fundamental Concepts of Psychoanalysis* (1977[1964]) with the introduction of *tuche* and *automaton*, two orders of repetition. *Automaton* refers to symbolic repetition; it is the structure of the symbolic order, which determines the subject. *Tuche* refers to an encounter with the real. The real is beyond *automaton*, beyond the insistence of the signifier to which we are condemned by the pleasure principle and which we see at work in all sorts of formations of the

unconscious such as dreams and slips of the tongue. (Ibid.: 53-54). Metaphorically we could say that *tuche* reveals itself as the accident, the noise that makes the dream fail, that makes us wake up. The other way around we could also state that the dream, that *automaton* serves as a defence against *tuche*, it hides the traumatising real. Rearticulated in terms of anticipation we would consider *tuche* as the failure of anticipation, as a failure of the search of the subject for satisfaction. Lacan further characterizes this *tuche* as something purely arbitrary; it is an unpredictable and uncontrollable choc.

### 3. Trauma versus phantasm

#### 3.1 Need, demand, desire and phantasm

In a certain sense Lacan also positions the traumatic real, that *tuche* reveals, at the origin of the coming into being of the subject when he articulates the relationship between phantasm and trauma: “the phantasm” he says “is never anything more than the screen that conceals something quite primary, something determinant in the function of repetition” (Ibid.: 60), it is a solution for an originary trauma. This is of course far from a self-evident quote. Several questions are in order here. Firstly, what does the notion phantasm stand for? Secondly, what kind of originary trauma is implied here?

The phantasm is a concept that appears in Lacan’s work in the 50ies and is conceived of as a relatively stable way of defending oneself against the lack in the Other. This becomes particularly clear in Lacan’s text “The Subversion of the Subject and the Dialectic of Desire in the Freudian Unconscious” (1977[1960]) where he formalises the general structure of the neurotic phantasm in the matheme ( $\$ \diamond a$ ), the barred subject in relation to the object. As we have developed elsewhere part of that article can be read as Lacan’s reinterpretation of the initial situation of helplessness of a human infant that Freud described in the *Project* (Knockaert, 2002b: 551).

As we have stated in the beginning of our lecture, according to Freud a human infant is initially incapable of seeing to its own needs. It is dependant on another human being, an adult to interpret his cry in order to attain some sort of satisfaction. With reference to the *Project* we can state that the adult will interpret the cry through the order of signifiers, he will interpret it as a demand, that is, as a symbolic expression. This dialectic, which we characterized as an anticipatory movement, forms the basis for the inscription of the infant in the symbolic order. As a result of this inscription the infant becomes a divided subject, that is, the subject as articulated by the signifier and characterized by a loss. From now on, the subject will have to pass his needs through language to attain the Other he is dependant on.

The Other, in that sense, is not only the one that satisfies the need of the infant but also the person that reveals the function of the symbol to it, through his speech and especially through the symbolic action of his appearing and disappearing (Adriaensen, 1992: 22). The alteration of his absence and presence acquires a metaphorical dimension, wherein the appearance of the Other expresses something else than that what it was initially conditionally coupled with. The presence of the Other becomes valuable as such, unconditionally.

So, every time the subject addresses a demand to the Other it will be characterized by a fundamental ambiguity. On the one hand, a demand expresses a need, and is in that sense a demand for a concrete object that can satisfy this need. On the

other hand, the demand is also a demand for love, for the presence of the Other as such. The dialectic of the demand makes subject and Other bound to each other in a reciprocal relation of dependency. The subject is depending on the Other's gift of satisfaction and love. The Other depends on the subject's acceptance or refusal of his gift.

This relationship of dependency can only be changed by the introduction of desire. The arising of an unconscious desire has two conditions. The first one is the failure of the Other to satisfy all the needs of the subject, the second one is the absence of the Other. The failure to satisfy the needs of the subject realises a breach between the subject and the Other, it confronts the subject with a lack in the knowledge of the Other and opens up the possibility for the subject to consider itself as different, separated from the Other and as at least partly unknown by him. The absence of the Other as the second condition for the arising of an unconscious desire opens on an obscure, unknown aspect of the Other. Where is the Other when he is absent? What makes him absent? What does he desire besides the subject? This line of questioning constitutes the path that will lead the subject to his own desire.

In a first logical step, a subject confronted with the absence of the Other will engage in a search for the object of the desire of the Other. It will try to attain and become this object to assure himself of the Other's love and in the same movement of his own existence (Van Haute, 2000: 108-113). This attempt will nevertheless prove to be vain. The subject will never obtain a definite answer with regards to the desire of the Other. This desire cannot be finally articulated, the last word that would reveal its meaning can never be said. Therefore, the subject is once again confronted with a lack, this time a symbolic lack.

This lack will change the positions between subject and Other. The confrontation with the lack in the Other will make the question of the subject return to himself in a transformed version: "When this Other refuses to give me the answer, then what does he want from me? What am I for the Other?" (Lacan, 1977[1960]:312). The questioning of the desire of the Other is thus transformed in a questioning of one's own being in relationship to this Other. The problem is that there is no definite answer in the Other to the question "What am I?", there is only a lack. The traumatic confrontation with this absence will drive the subject to create a phantasm, an unconscious answer to the question "What am I for the Other?". The phantasm stages the relationship of the subject to the lack in the Other as the cause of desire. This is what Lacan calls the object *a*. The object *a* as the cause of desire is as such an unattainable object that ensures the endless renewal or metonymical repetition of the desire of the subject.

### 3.2 Phantasm versus trauma

It is in this sense that we have to understand that the phantasm is a defence against an encounter with the traumatising lack in the Other. It is the screen that conceals the opacity of the Other and the suture of the divided subject. Trauma and phantasm are thus opposed. Another trait that distinguishes phantasm and trauma is their relation to satisfaction. While, as we have stated, trauma has to do with an impossibility to obtain satisfaction, the phantasm is in a certain sense the tool a subject uses to obtain satisfaction. A phantasm, of which the most simple example is probably Freud's "a child is being beaten", is a scenario that establishes a relationship between subject and other that is quite often complex and that serves as the basis for a subject's search for satisfaction in masturbation or in a sexual relationship (Soler, 1997: 49). In

line with this difference we can also articulate the following opposition between phantasm and trauma: the phantasm stays within the limits of the pleasure principle while trauma consists of a vital or sexual violation that exceeds the pleasure principle. The phantasm stays within the limits of the pleasure principle because it is firmly rooted in the symbolic and as such it regulates all the expectations, convictions and reactions of the subject (Ibid.). One could call it the ever-repeated form of the subject's anticipatory processes. It functions as a filter for all the contingencies the subject encounters so that it can avoid traumatic encounters with the real (Ibid.: 50).

### 3.3 Trauma as the encounter with a real on which a subject cannot anticipate

That brings us to our last question. How on earth can a subject that is armed by a phantasm even be traumatised? Not that we want to doubt the existence of trauma, its more that this questions seem to open a fruitful way of tackling another problem. If we read the DSM we find the following description of trauma and posttraumatic stress disorder: a posttraumatic stress disorder is a reaction to a traumatic event, characterized as an event out of the range of ordinary human experiences and constituting a serious treat to the physical integrity of the person involved or a fellow human being. The following three clusters of symptoms are distinguished: (i) the traumatic event is continually being relived, (ii) the stimuli that are part of the trauma are being avoided or general reactivity becomes blunt, (iii) continuing symptoms of increased irritability are present (DSM-IV). However not everyone who is confronted with a so-called traumatic event will develop PTSD. Whether or not a person will do so cannot be unilaterally attributed to the traumatic event, nor to its duration or seriousness.

From our reading of Freud and Lacan it is clear to us that no encounter, how brutal it may be, can be traumatic without a subjective participation. This is also what Freud states in the last pages of "Inhibitions, Symptoms and Anxiety" (1926a[1925]). There he notes that an external danger can only become traumatic if it passes through an interiorisation. It is not quite clear to us how we must understand such an interiorisation, and a lot will probably remain unclear at this point of our reasoning. But a possible hypothesis would be that the traumatic event must contain elements that destabilise the phantasm of the subject. In this context some analyst speak of a wild traversation of the phantasm: what is traumatic in life, for a subject, are those encounters that break through the screen of the phantasm and reactualise the initial trauma against which the subject constructed the phantasm in the first place (Vanderveken, 1997: 53). An event must thus realise a sort of short-circuit of all the scenarios a subject installs between himself and the Other and confront him brutally with the lack in the Other and the inconsistency of its own being to be able to become traumatic. Only when an event brutally reiterates the singular context of a subject's initial trauma it will be able to sling a subject out of the linguistic social bond. An encounter with the real of this kind does not inscribe itself in the libidinal dynamics of remembering and forgetting. Therefore it retains an actuality for the subject which cannot be historicized. In this respect, the traumatic accident also constitutes a destruction of the progress of time. In other words it breaks up the historicity of the subject, annihilates the representations of possible events and therefore also the anticipatory attitudes of the subject (Barrois, 1988: 207). To conclude we could say that trauma as an encounter with the real awakens the subject out of his dream without any warning.

#### 4. Conclusion

Anticipation as a dynamic, symbolic and social movement that takes place between living systems and their environments meets a limit in traumatic phenomena. We can characterize these phenomena as encounters with the real. From a Freudian viewpoint, the specific traumatic character of an encounter with the real has everything to do with a failure of the anticipatory processes of the psychic system: when these processes fail to lead to a satisfaction of the drives a subject is traumatised. With Lacan, we know that this failure is structural, it even constitutes the origin of the coming into being of the subject. Against this originary trauma every (neurotic) subject constructs a phantasm, an unconscious answer to the question “What am I for the Other”. In a certain sense, the Phantasm is a fixed scenario, or stated differently the ever-repeated form of the subjects anticipatory processes that aim for a satisfaction of the drives. An encounter with the real is traumatic then, since it disrupts the phantasm of a subject, it disables a subject in its search for satisfaction. It is in that sense that we have to comprehend that no encounter can be traumatic for a given subject without a subjective participation.

#### 5. References

Adriaensen Mark (1992). *Over de subjectwording, een aantal representaties uit het onderwijs van Lacan*. Gent: Idesça.

Barrois Claude (1988). *Les Névroses Traumatiques, Le Psychothérapeute Face aux Détresses des Chocs Psychiques*. Paris: Bordas.

Demoulin Christian (1997). *Faire Fiction – Fixion du Trauma*. Quarto, 63, pp. 26-28.

Evans Dylan (1996). *An Introductory Dictionary of Lacanian Psychoanalysis*. London & New York: Routledge.

Freud, Sigmund (1892-1899). *Extracts From the Fliess Papers*. In: Standard Ed. 1 (1995), London: The Hogarth Press. pp. 173-280.

Freud, Sigmund (1893c). *Some Points for a Comparative Study of Organic and Hysterical Motor Paralyses*. In: Standard Ed. 1. (1995). London: The Hogarth Press. pp. 155-172.

Freud Sigmund (1916-17). *Introductory Lectures on Psychoanalysis, Part III. General Theory of the Neuroses, Lecture XVIII, Fixation to Traumas – The Unconscious*. In: Standard Ed. 16 (1995), London: The Hogarth Press. pp. 273-285.

Freud Sigmund (1918b[1914]). *From the History of an Infantile Neurosis*. In Standard Ed. 17 (1995), London: The Hogarth Press. pp. 1-123.

Freud Sigmund (1920g). *Beyond the Pleasure Principle*. In: Standard Ed. 18 (1995), London: The Hogarth Press. pp. 1-64.

Freud Sigmund (1926d[1925]). *Inhibitions, Symptoms and Anxiety*. In: Standard Ed. 20 (1995), London: The Hogarth Press. pp. 75-175.

Freud Sigmund (1933a [1932]) *New Introductory Lectures on Psycho-Analysis (Lectures XXIX-XXXV)*. In: Standard Ed. 22 (1995), London: The Hogarth Press. pp. 1-248.

Freud, Sigmund (1950a [1895]). *A Project for a Scientific Psychology*. In: Standard Ed. 1 (1995), London: The Hogarth Press. pp. 281-397.

Knockaert Veroniek, Geerardyn Filip, Van de Vijver Gertrudis, Van Bunder David & Ariane Bazan (2002a). Anticipation, Memory and Attention in the Early Works of Freud. *International Journal of computing anticipatory systems*, no. 12, pp. 241-252.

Knockaert Veroniek (2002b). The Freudian Unconscious? A Subversion of Evolution as Adaptation. *Psychoanalytische Perspectieven*, 20, 4: 549-565.

Lacan Jacques (1984[1938]). *Les Complexes Familiaux Dans la Formation de L'Individu*. Paris : Navarin Editeur.

Lacan Jacques (1988[1954-55]), *The Seminar, Book II, The Ego in Freud's Theory and in the Technique of Psychoanalysis* (transl. S. Tomaselli), New York: Cambridge University Press.

Lacan Jacques (1975[1953-54]). *Le Séminaire, Livre I, Les Ecrits techniques de Freud*, texte établi par J.-A. Miller, Paris : Du Seuil.

Lacan Jacques (1977[1957]). The Agency of The Letter in the Unconscious or Reason since Freud, In: *Ecrits, a Selection* (transl. A. Sheridan), New York, W.W. Norton & Company Inc., pp. 146-178.

Lacan Jacques (1977[1960]). The Subversion of the Subject and the Dialectic of Desire in the Freudian Unconscious, In: *Ecrits, a Selection* (transl. A. Sheridan), New York, W.W. Norton & Company Inc., pp. 292-325.

Lacan Jacques (1977 [1964]). *The Seminar, Book XI, The Four Fundamental Concepts of Psychoanalysis* (transl. A. Sheridan), London: Hogarth Press and the Institute of Psychoanalysis.

Lacan Jacques (1998[1957-1958]), *Le Séminaire, Livre V, Les Formations de L'inconscient*, texte établi par J.-A. Miller, Paris : Du Seuil.

Rosen Robert (1985). *Anticipatory systems*. Pergamon Press.

Soler Colette (1997). *Trauma et Fantasme*. Quarto, 63, pp. 45-50.

Vanderveken Yves (1997). *L'Hallucination: Le Rêve Traumatique du Psychotique*. Quarto, 63, pp. 57-58.

Van de Vijver Gertrudis (1998). Anticipatory systems, a short philosophical note. In: *CP437, Computing Anticipatory Systems* (Dubois, D. Ed.). NY: The American institute of Physics. Pp. 31-37.

Van Haute Philippe (2000). *Tegen de Aanpassing, Jacques Lacan's 'Ondermijning' van het Subject*. Nijmegen: Sun.