

# Subliminal processes, dissociation and the ‘I’

Petr Bob, *Prague*

*Abstract:* The study of unconscious processes leads to the hypothesis of the limit of consciousness, which involves two main kinds of psychic activity. The first represents psychic contents which are subliminal for their low energy, the second subliminal contents which are inaccessible to consciousness because they are dissociated in the subliminal region. Dissociation is a concept introduced by Pierre Janet for splitting consciousness due to traumatic events or during hypnosis. It takes a more general form in Hilgard’s neo-dissociation theory of hypnotic phenomena and also in Jung’s theory of the collective unconscious. Further generalization links it to the modern findings of explicit and implicit perception, leading to a shift in dissociation from hypothesis to clinical, experimental and theoretical reality. Studies in hypnosis also point to the existence of an integrative psychic entity, that comprises the conscious ‘I’. Hilgard called this the hidden observer, and his findings represent empirical confirmation of Jung’s term for the Self as mirror ‘I’, which leads to many important consequences for self-discovery and the meaning of life.

*Key words:* archetype, conscious and non-conscious processes, dissociation, ‘hidden observer’, Hilgard, hypnosis, Janet, the Self, subliminal processes.

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## Introduction

The discovery of unconscious processes in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries led to fundamental changes in our understanding of the human psyche. These findings gave rise to the formulation of the concept of a threshold of consciousness which acts as a barrier between consciousness and the unconscious dynamic processes which spontaneously influence conscious activity and behaviour. The threshold of consciousness limits our conscious knowledge, but unconscious ideas, ‘knowledge’, perception, intention and affects can be made accessible and so enlarge our conscious awareness.

## Essential findings about subliminal processes

Explicit perception describes perceptions of which a subject is consciously aware and which he or she can therefore communicate verbally, while implicit

perception is that of which the subject is not aware and thus may be verified only indirectly by observation or measurement. Implicit perception occurs at an unconscious level which introspection cannot explore. Nevertheless, the information which is received unconsciously also influences the individual even though it is perceived below the threshold of consciousness. All information which exists under this threshold is called subliminal.

A suitable method for the study of implicit perception is that of subliminal stimulation, for example, by a very short-term projection of an image. Libet et al. (1979) showed that visual stimuli, with a duration of less than 200 to 500 milliseconds, depending on the character of the stimulus, are not registered consciously by the subject. Auditory stimulation offers another similar approach (Urban 1993). In 1957, an interesting experiment was performed which led to the restriction of subliminal advertising; during a film, two verbal messages were subliminally projected 'drink Coca-Cola' and 'eat popcorn', which led to a dramatic increase in the sale of popcorn (58%) and an 18% increase in the sale of Coca-Cola (Wortman et al. 1992). Subsequent studies confirmed the existence of subliminal stimulation and the method of subliminal activation was confirmed as a suitable instrument for the study of the dynamic and cognitive unconscious (Crick & Koch 1995; Marcel 1983). This led several authors to concentrate on the study of the dynamic unconscious and its connection with emotional conflict. For example, subliminal stimulation in phobic patients is in the form of two subliminally projected pictures, one of which is connected to the inner conflict and the other which is neutral in meaning, although the patient was not consciously aware of the significance of the two images (Shevrin et al. 1992).

Measurement of skin resistance shows that the neutral stimulus does not lead to observable changes but the image with meaning connected to the phobia gives significantly different measurements. This corresponds to Jung's findings during his experiments with association, where he also registered changes in the skin resistance in relation to words that connected to the emotional disturbance produced by complexes as evidenced in the lengthened reaction time compared with neutral words (Jung 1973).

The existence of subliminal perception is also confirmed by the phenomenon of blind sight that results from damage of the visual cortex. It can be demonstrated that, in the blind field of vision, a perception is possible of which the subject is not consciously aware but which nevertheless has an influence on his emotional state (Weiskrantz 1996, 1997). Similar results are also shown by the phenomenon of split brain that is present after surgical division of the *corpus callosum*.

Further support for implicit perception came from studies of 'Event-Related Potentials', for example, in patients with emotional conflict. Implicit information processing was confirmed in that meaningful stimuli were distinguished from those which were emotionally more neutral by a significant different amplitude of cerebral P-wave response, demonstrating that these differing brain-wave

responses could distinguish between two stimuli with a markedly different emotional content (Knight 1997; Shevrin et al. 1992; Williams & Jeong 1989). Other studies confirmed the finding that P-wave response reflects unconscious processes (Wong et al. 1994). Different amplitudes of response reflect the unconscious analysis of the emotional meaning of words, in that words with higher emotional content give higher amplitude responses (Kostandov & Arzumanov 1977; Brandeis 1984; Brandeis & Lehmann 1986).

The use of P<sub>3</sub> wave response to demonstrate the ability of prosopagnostic patients to distinguish familiar from unfamiliar faces was investigated by Reanault et al. (1989). Stross and Shevrin (1962, 1968, 1969) showed that the investigation of 'freely evoked images' after presentation of a subliminal stimulus resulted in alteration of thought content under hypnosis and concluded that hypnosis leads to heightened access to subliminal stimuli. They also suggested that thought organization during hypnosis shares features in common with thought organization during dreaming, a finding supported by other studies (Fischer 1954; Poetzl 1960).

### Subliminal processes and dissociation

There are some studies which confirm a common view that the manifestations of post hypnotic suggestion are very similar to some psychopathological phenomena (Huston et al. 1934). Psychopathological phenomena are, in many cases, induced by the mechanism of repression and lead to a dissociated state by lowering the corresponding psychic content beneath the threshold of consciousness. Probably both dissociative reactions induced by repression and also post-hypnotic suggestion are connected to implicit or subliminal perception and information processing.

The term dissociation has its origin in the word 'dis-association' which means disconnecting or lowering the strength of associative connections. Even before Janet, Moreau de Tours used the term 'psychological dissolution' (*désagrégation psychologique*) in the year 1845 (van der Hart & Friedman 1989). Hughlings Jackson used the term 'dissolution' and also 'the dreamy state' which meant a splitting of consciousness leading to amnesia and other symptoms such as de-personalization, de-realization, hallucination or dissociation of perception (Mearns 1999). Morton Prince, one of Janet's contemporaries, used the term co-conscious to describe a state in which two forms of consciousness seem isolated from each other. Max Desoir identified two main streams of mental activity, upper or lower consciousness where the lower one may emerge, for example, in hypnosis (Hilgard 1974). Myers introduced the term subliminal self, a term, which was later, supported by William James.

Janet first elaborated the concept of dissociation in his work 'Psychological automatism' where he outlines his notion of psychic functions and structures (Janet 1890; van der Hart & Friedman 1989; Havens 1966). He deals with psychological phenomena often observable in hysteria, hypnosis, in states of

suggestion or possession. From 1889 his work was greatly influenced by the collaboration with Charcot in the Salpêtrière hospital in Paris.

During complete psychological automatism, consciousness is totally dominated by the repetition of past experiences, for example, in somnambulism or hysterical crisis (Janet 1890; Havens 1966). In a case of partial automatism, only a part of consciousness is dominated, as it is in the cases during hypnotic anaesthesia, when touching an object is not registered consciously but may be registered by what Hilgard (1986) later described as the 'hidden observer'. In cases of complete or partial automatism, systems of unconscious fixed ideas, which repress conscious control and perception, play an important role, forming part of the complexes which Jung explored in his study of word association at the Burghölzi with Eugene Bleuler (Jung 1973). Complexes may emerge in a variety of forms, sometimes as symptoms such as hallucinations or body movements which may symbolically represent a past psychological trauma.

Janet considered hysteria to be a defect of psychic wholeness and in cases of abulia he thought that 'degeneration of will' was a consequence of the influence of unconscious processes that lead to repression of conscious psychic activity. Janet described many forms of somnambulism which seemed to arise from dissociated states of mind, rooted in memories and fixed ideas of which the subject is not consciously aware. Fixed ideas are presented in the form of dreams, dissociative episodes that emerge during hysterical episodes or as secondary consciousness under hypnosis. A characteristic feature of these states is a lowering of the level of consciousness (*abaissement du niveau mental*) which manifests itself by increasing dissociation and a reduction in psychological tension, leading to a re-integration at a lower psychological level corresponding to that of the dominant fixed idea (Haule 1983). Janet's notion of dissociation was a fundamental contribution to psychological knowledge and Ellenberger (1970) has used the image of the gradual archaeological uncovering of a great town covered by lava to describe the re-discovery of Janet's central ideas.

Jung thought that the concept of dissociability offers a solution to the problems that arise from the idea of a threshold for consciousness (Jung 1972). Jung suggested that some psychic contents do not have sufficient energy to become consciously accessible; however there are other psychic contents which are highly charged but which have never become conscious – these are archetypal collective motivations and ideas which are projected into the outside world in the form of symbols.

### **Hypnosis and Hilgard's neo-dissociation theory**

A new interest in the theory of dissociation emerged again after the Second World War with a revival of interest in the phenomenon of the hypnosis and an awareness that the roots of psychoanalysis originate partly in Freud's studies with Charcot in 1885–86 at the Salpêtrière in Paris.

According to Freud, dissociated states result from the repression of libido, energy which is sexual in nature. Other depths psychologists differed from Freud in their understanding of libido; for Jung, libido represents general psychic energy, whereas for Adler it represented the will to power and Viktor Frankl considered libido to be the meaning of life. With the exception of Jung these notions are characterized by metaphysical concepts which consider psychic functions to be the manifestations of a specific underlying energy, such as Freud's view that higher psychic functions are sublimated forms of sexual energy. Jung's studies led him to the concept of the collective unconscious and archetypes partly influenced by the emerging of ethology. Jung considered archetypes to be typical human patterns of behaviour, which can be studied on the biological level by ethological methods. He also investigated the role of archetypes in mythology and dreams as well as religious belief, which he considered to be based on the projection of dominant psychic contents into anthropomorphic or religious symbols.

This splitting of the study of the unconscious into many differing models meant a great loss for the scientific study of dissociation and Janet's promising developments were sidelined for some time. However, Ernest Hilgard continued in Janet's tradition and his neo-dissociation theory is initially sketched out in 'Toward a neo-dissociation theory: multiple cognitive controls in human functioning' and then spelt out in more detail in later work (Hilgard 1974, 1986). According to Hilgard, secondary dissociated consciousness is characterized by a 'hidden observer' which has the characteristics of a central stream of consciousness towards which information from many secondary streams or personalities converges. A similar phenomenon was described as the 'internal self-helper' in multiple personality disorder (Lynn et al. 1994; Hilgard 1986).

Several authors point to the fact that experiences under hypnosis support the view that something similar to multiple personality may also be present in people who have not been given this diagnosis (Gabel 1989; Saley 1988). The human psychic system may thus be understood as an ordered system of complexes, mental representations based on neuronal assemblies with many associated connections which are differentiated by the strength of the synaptic connections between them. The complex which most often dominates was called the ego complex by Jung, and in multiple personality it corresponds to the primary personality. Other personalities, called secondary, correspond to the other complexes. Multiple personality thus may be considered as a structural model of the dissociated human personality. 'The hidden observer' corresponds to some of the empirical findings that led Jung to introduce the term the 'Self'. In this context, dreams may be considered as a vehicle for disseminating information among the dissociated elements of the human personality (Gabel 1989; Saley 1988). These are some of the key features of neo-dissociation theory.

These ideas are supported by research findings, for example in relation to hypnotic analgesia, such as the phenomenon of automatic writing, whilst the attention of the subject under investigation was taken up by a distracting

activity. During these experiments, the subject was pricked with a needle into the hypnotically anaesthetized left-hand. The subject's right hand wrote the sentence 'you hurt me' even though the hypnotized subject denied any awareness of pain (Hilgard 1986). Automatic writing under hypnosis was an experimental technique that Janet had already used to obtain information which was inaccessible to the subject consciously and which was stored in implicit memory. Experiments with hypnotic analgesia also investigated the process of evoking painful memories, memories that were detected by the 'hidden observer' during the experiment. These clinical examples support the view that information about pain is registered and stored during hypnotic analgesia, as Hilgard's experiments demonstrated. Experiments undertaken in Canada suggest that the 'hidden observer' is not an experimental artefact (*ibid.*). Dissociative processes must therefore be seen as a clinical reality, although the concept of the 'hidden observer' as a cognitive phenomenon of implicit knowledge suggests that dissociation between pain and consciousness is not complete.

### **The 'hidden observer' and the integrity of the unconscious**

Studies in hypnosis show that a lowering of the threshold of consciousness leads not only to the manifestation of dissociated components of the personality but also to the discovery of an integrative entity called the 'hidden observer', which in multiple personality operates as an internal self-helper that seems to be aware of other sub-personalities, even though these sub-personalities are completely dissociated from each other. One example might be the case in which a patient, who had undergone an operation under anaesthetic, was unable consciously to recall the procedure but under hypnosis the 'hidden observer' could give an account of the operation and could describe the pain, but as if it was experienced by somebody else (Hilgard 1986). This phenomenon, in which, under hypnosis, the 'hidden observer' could describe events occurring when that person was previously under anaesthesia, was also confirmed by Levinson (1967) and by Cheek (1959, 1966). It may be the case that the 'hidden observer' may provide an explanation for phenomena such as 'Near Death' and 'Out of Body' experiences. In addition, Lynn *et al.* (1994) suggest that the 'hidden observer' in hypnosis or hypnotic dreams may be able to provide information about personal experiences that is otherwise unavailable to conscious recall, including traumatic events such as physical or sexual abuse. These authors also found evidence of the 'hidden observer' in 80% of non-hypnotized subjects who are in a relaxed state. It is possible that mystical experiences may represent a moment of manifestation of the unconscious 'counterpart' or 'hidden observer' and can be explained in these terms.

### **Conclusion**

Jung was aware of the possibility that there might be a centre of subjectivity at an unconscious level and thought that this represents psychic wholeness which

includes the conscious 'I'. He called this centre the 'Self' and spent much of his time in the empirical study of its manifestations. It provided the inspiration for his study of religion, which he understood as a phenomenon of symbolized projection. For example, Christ's divinity is understood as a projection of psychic wholeness – the Self. In these ways, Jung made a significant contribution to the study of the mystery and meaning of human experience in psychological terms.

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TRANSLATIONS OF ABSTRACT

L'étude des processus inconscients amène à poser l'hypothèse de la limite de la conscience, qui se rapporte à deux sortes principales d'activités psychiques. La première concerne les contenus psychiques qui sont subliminaux parce que peu énergétisés, la seconde des contenus subliminaux inaccessibles à la conscience parce que dissociés dans la zone subliminale. Le concept de dissociation a été introduit par Pierre Janet pour parler des clivages de conscience qui apparaissent à la suite d'événements traumatiques ou pendant l'hypnose. Ce concept prend une forme plus générale dans la théorie de Hilgard sur la néo-dissociation dans le phénomène hypnotique, ainsi que dans la théorie de l'inconscient collectif de Jung. Une autre considération le relie aux découvertes modernes sur la perception explicite et implicite, permettant à la dissociation de passer du statut d'hypothèse à celui de réalité clinique, expérimentale et théorique. Les études faites sur l'hypnose amènent aussi à penser à l'existence d'une entité psychique intégrative, la conscience 'je'. Hilgard l'appelle l'observateur caché, et ses découvertes donnent une confirmation empirique à la conception de Jung du soi en tant que miroir du 'je', ce qui a de nombreuses implications pour la découverte de soi et le sens de la vie.

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Die Untersuchung unbewußter Prozesse führt zur Hypothese einer Bewußtseinsgrenze, an der sich im Wesentlichen zwei verschiedene Arten von psychischer Aktivität abspielen. Die erste repräsentiert psychische Inhalte, die aufgrund ihrer geringen Energie subliminal sind, die zweite subliminale Inhalte, die dem Bewußtsein unzugänglich sind, da sie in der subliminalen Region dissoziiert sind. Die Dissoziation ist ein Konzept, das Pierre Janet eingeführt hat für die Spaltung des Bewußtseins aufgrund von traumatischen Ereignissen oder während einer Hypnose. Sie nimmt in Hilgard's Theorie der Neu-Dissoziation von Phänomenen unter Hypnose und auch in Jung's Theorie des kollektiven Unbewußten eine allgemeinere Form an. Eine weitere Verallgemeinerung bringt sie in Verbindung mit den modernen Forschungsergebnissen zur expliziten und impliziten Wahrnehmung, die zu einer Verlagerung der Dissoziation von einer Hypothese zu einer klinischen, experimentellen und theoretischen Realität führen. Untersuchungen über Hypnose weisen auch auf die Existenz einer integrierenden psychischen Gegebenheit, des bewußten 'Ich'. Hilgard nannte dies den verborgenen Beobachter, und seine Funde bedeuten die empirische Bestätigung von Jungs Begriff des Selbst als Spiegel-'Ich', was zu vielen wichtigen Konsequenzen für die Selbstentdeckung und den Sinn des Lebens hat.

Lo studio dei processi inconsci porta all'ipotesi del limite della coscienza, che prevede due principali modalità di attività psichica. La prima rappresenta i contenuti psichici, subliminali per la loro bassa energia, la seconda i contenuti subliminali che sono inaccessibili alla coscienza perché dissociati nella regione subliminale. Il concetto di dissociazione fu introdotto da Pierre Janet per scindere la coscienza in seguito ad eventi traumatici o durante l'ipnosi ed assume una forma più generale nella teoria della neo-dissociazione dei fenomeni ipnotici di Hilgard ed anche nella teoria junghiana della coscienza collettiva. Un'ulteriore generalizzazione lega il concetto alle moderne scoperte di percezione esplicita ed implicita, portando ad un mutamento della dissociazione da ipotesi a realtà clinica, empirica e teorica. Altri studi sull'ipnosi puntano all'esistenza di un'entità psichica integrativa, l'«Io» conscio. Hilgard lo definì come un osservatore nascosto, e le sue scoperte rappresentano la conferma empirica del termine usato da Jung per l'«Io», cioè lo «sguardo che rispecchia», che produce numerose ed importanti conseguenze per la scoperta del Se' e del significato della vita.

El estudio del proceso inconsciente conduce a la hipótesis del límite de la conciencia, ella envuelve a dos tipos de actividad psíquica: La primera representa a los contenidos psíquicos que son subliminales por su baja energía, la segunda contenidos psíquicos subliminales que son inaccesibles debido a que están disociados en la región subliminal. La disociación es un concepto introducido por Pierre Janet para entender la separación de la conciencia debido a eventos traumáticos o durante la hipnosis. Ella toma una forma mas general en la teoría de la neo-disociación de los fenómenos hipnóticos de Hilgard y también en la teoría del Inconsciente Colectivo de Jung. Otras generalizaciones los relacionan con los hallazgos modernos de las percepciones implícitas y explícitas. Conduciendo a un viraje en la hipótesis de la disociación hacia realidades clínicas, experimentales y teóricas. Estudios sobre hipnosis así mismo apuntan a la existencia de una entidad integradora, el «Yo» consciente. Hilgard llama a este el observador oculto, y sus hallazgos representan la confirmación empírica de la definición de Jung del Self como «yo» espejo. Lo cual conduce a muchas consecuencias en el auto-descubrimiento y en el significado de la vida

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