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Subliminal Suggestion: The Challenge of Clinical Experimentation

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« Here is one of the most surprising characteristics of the mental life: we only perceive the minimum of impressions, which we constantly envelop with our sensory periphery. Never do they integrally penetrate our experience, i.e. our conscious experience, which digs out a riverbed through this multitude just like a small stream runs through a large prairie studded with flowers. However, the physical impressions, which do not matter, are as available to us as those which matter; they affect our senses with an equal vigour. Why don't they pierce the consciousness? Here lies the mystery which we can identify but cannot explain by merely citing the "narrow-mindedness" of the consciousness as its foundation.»¹

The subliminal suggestion consists of introducing an opinion or a motivation to the human spirit in order to launch a decision-making or a behavioural process, which is previously defined. This suggestion is, by definition, subconscious². Its unique quality comes from its furtive character. In fact, any stimulus emitted within the spectrum of conscious perception is automatically subjected to the receiver's censorship. The act of directly attaining the "anesthetized" subconscious, that capacity of censorship, which is a feature of the consciousness, facilitates data storage in the immediate memory. When we meet a need or a desire, we naturally enter a phase of limited resolution before possibly getting involved in a process of resolution that is more extensive: we always start by looking for immediately movable solutions in our memory. A subliminal suggestion theoretically increases the probability, according to which the chosen solution – among those which are stored in our immediate memory – is one of those a priori subconsciously introduced.

In the 80's, the international legislation was reasonably interested in this phenomenon for the purpose of defining precise legal frameworks by an indisputably manipulatory and therefore unethical therapeutic technique – ultimately promotional. But the experimental fields, mainly clinical, were, according to them, more ancient and diverse than we would have ever suspected.

Nowadays, within the market race, subliminal suggestion is probably as terrifying as predicted for the certain future of business and management sciences, at the very least on the experimental level, notably owing to the presence of an incalculable number of cross-sectional variables.

¹ James, 1915

² Latin etymology: *sub-limen* which means «under the threshold». In this particular case, it means existing or functioning below the threshold of consciousness.

Nevertheless, despite the numerous experiences carried out in the past, we return to them; nobody seems to have really proven the suggestive capacity of the subliminal message, at any rate as far as controlled performance is concerned. That is also our own case. This is very probable due to the existence of numerous context variables, which, logically, influence any form of suggestion.

The objective of such communication is to have a comparative and critical look at the European, Slavic, and American principal experiments, as regards to subliminal suggestion, from the time of the visionary awareness of Leibniz's phenomenon in 1704 (the "subliminal" substantive did not appear until 1893); to describe the experimental protocol carried out with care: hypothesis, methodology, and results; and finally, to emphasize the inherent complexity of the evaluation of subconscious suggestion performance, particularly within a clinical experimental framework.

1. Theoretical aspects, based on persuasion, and synopsis of principal experiments

In the field of behavioural sciences, few hypotheses were at the basis of many controversies according to which men can be affected by external stimuli of which they are ignorant, and even less by the suggestive power. This notion of conscious-free perception has always been considered natural by Philosophers such as Democritus, Socrates, Aristotle, and of course, Leibniz, who have discussed it. But it draws on a very special relation, one which does not stand to reason among cerebral physiology, fantasies, and influences. This conscious-free perception suggests that the underlying cerebral processes of the conscious experience differ from those which link external stimuli to the organism's responses. Therefore, it implies that the organism can convey the information without ever having a conscious relation.

Three types of given data support this vision: those based on subjective experience, those stemming from neurological studies, and more specifically, those founded on behavioural research data with reference to subliminal perception. The existence of dreams and hallucinations without any connection to external stimuli attest to the fact that the conscious perceptive experiment depends on cerebral processes, which can function independently of those, which underlie the reception of information coming from the external world. Conversely, when it comes to competencies, in cases that require extra attention, in sleepwalking and many other involuntary responses to bodily regulations of external stimuli variations, the information can be received and processed, and can set off responses without reaching the consciousness. The synthesis of these observations suggests that the consciousness and the transmission of information depend on different systems, which can, in certain circumstances, function independently of one another.

Since 1948, the existence of these two systems – sine qua non condition of the subliminal perception – has been confirmed by neurophysiologic researches³. The reception and subsequent transmission of sensory information evoked by external stimuli depends on classical sensory routes, which stem from peripheral receptors to their cortical projections.

³ Moruzzi and Magoun, 1949; Samuels, 1959; Dixon, 1971 and 1981

On the other hand, the “consciousness” of this circulation, i.e. the perceptive experience, depends on the functional level of fibres which make up a dense network of cells, the nucleus of which is found in the cerebral trunk, and which extend beyond the latter in order to infiltrate the cortex. If the function of this system is blocked, following a surgery or medication for example, the sensory information continues to reach the cerebral cortex, but this process remains unconscious. This greatly important discovery for the supporters of the subliminal perception was confirmed by the researches of Libet and his associates in 1967. Furthermore, on a more psychological than physiological level, the researchers, for example, have noticed that the conscious threshold of menacing words and images could be, more or less, radically raised to those that are more neutral. Experiences⁴ in which electroencephalography, cardiac frequency, and perception thresholds are recorded at the same time, and before the subject restores consciousness of a visual stimulus, the luminosity of which increases progressively, the brain has the capacity to analyze its importance and, consequently, to modify its own level of awakening for the purpose of accelerating or delaying awareness of the information it carries. Hence, we observe that, at a preconscious treatment level, the brain can “decide” if the information coming from a lateral canal, or lacking in attention, must be kept away or used to facilitate responses evoked by the material which retains the conscious attention of the subject.

These examples, more or less exhaustive, show that the individual’s perceptive systems are nebulous, on the psychological as well as the physiological level. The experiences and personality of each individual makes him unique, but certainly not alone. Besides the environmental influence on the perceptive processes, the individual must merge with the economic reality of the mass perception: message distortions are numerous and the intrinsic symbols of messages are often complex. However, when we go deeper into the study of such phenomena, without talking about altered states of the consciousness, or, in other terms, about cerebra-behavioural pathologies, we take into account the undeniable existence of a basic field of modified conscious states: states inherent to the consumption of drugs, psychosis, meditative states, religious ecstasy or even to hypnotic trances.

Thus, subliminal suggestion has its foundations in physiology and sensitive and chemical cortical performances of our body, and in those psychological performances concerning symbols, fantasies, structures and all filters, which try to protect our psyche. It is therefore foreseeable that the science of persuasion benefits from the researchers’ growing attention. Behaviourists⁵ opposed the emergence of motivational research⁶ and the “main schools” of suggestion and persuasion.

The oriental school (Russia, Bulgaria) was basically dominated by the work of Lozanov⁷, the founder of “suggestology”. As regards to this school, it is in learning matters, namely Pavlov’s intense researches on conditioned reflexes, that we have, theoretically, introduced an important element of plasticity to the Russian reflexological tradition: the latter explains any behaviour, including human, as originating from environmental stimuli.

⁴ Corteen and Wood, 1972; Henley and Dixon, 1974

⁵ Watson, 1924; Skinner, 1950

⁶ Dichter and Evans, 1959

⁷ Lozanov, 1966

According to the occidental school (American), Watson, Skinner, Erickson, and the Palo Alto group (1924) have mainly dominated it. As a reaction against the introspective psychology's powerful influence during his time, Watson stated that psychology could not become an efficient science while restricting that which is directly observable: the study of the mind cannot be objective, whereas that of behaviour can. Following Pavlov's theory of reflexology, he admits that any complex human behaviour is the sum of simple conditioned reflexes, and he consequently deduces that any behaviour is acquired. This is the behaviourism of Watson, which inspired Skinner's initial work, even if the latter quickly gave up on Watson's opposition to take the mind into consideration.

Finally, for those who are French, the occidental school there was, without a doubt, dominated by Pierre Janet (1920), and by the schools of the Paris Psychoanalytical Society and the Psychiatric Evolution. Compared to world research, the psychoanalytic tradition of the time was, nonetheless, well established in France; the researches would relate very quickly to the psychoanalytical suggestology by means of the verbal language and its symbolic system, as well as to prestigious and ideokinetic suggestions.

In the end, we undoubtedly owe the primary observations of this phenomenon to Leibniz, as of the eighteenth century. Because of the probable existence of the subliminal suggestion in nature, Leibniz, who described it as "small perceptions", believed that we are not always able to justify our behaviours or to explain our motivations, that which surely implies the existence of a peripheral subconscious suggestion, definitely of a natural origin, generated by our environment even: *"All our deliberate actions are the result of a contest among small perceptions, and even our habits and passions, which have considerable influence on our deliberations, come from there, because these habits are born bit by bit, and consequently, without the small perceptions, we would not arrive at these notable measures. (...) To sum up, it is a great source of error to trust that there are no perceptions in the mind except those which one perceives..."*⁸

At the end of this first approach, embryonic but nevertheless essential to understand the evolution of the experimental field, we have tried to draw up a cartography along with various related disciplines since the official appearance of the term "subliminal", an appearance recognized in 1893. From that time on, if the suggestive power of the subliminal suggestion was not confirmed, it was not invalidated either.

In their quest for new treatments against certain psychopathologies, Freud and Pöetzel (1917) noticed, thanks to their techniques of dream analysis, that images projected at high speed could reach the subconscious of their subjects without their realization. Intrigued, the principal surrealist painters of the time⁹ gave a new dimension to their painting by hiding symbols in their works of art. From this substance, which is more economic than scientific due to the modernity of the concept, an experimental field wider than ever was born, with each new experience trying to exceed the limits of the previous one.

McGinnes (1949) tried to measure the electrodermal reactions of subjects who have been presented with subliminal taboo stimuli. Therefore, Lazarus, McCleary (1951) and Erickson (1956) too conducted experiments and, instead of using words with emotional resonance, called upon meaningless neologisms, the emergence of which was related to an electric shock or conditioning. As for Gilchrist and Nesberg (1952), they tried the first clinical marketing applications by means of high consumption products.

⁸ Leibniz, 1966: 96-97

⁹ Ernst, Breton and Dali (1920-1950)

This topic was taken up again, in the field this time, by Vicary who used the famous New Jersey experiment (1957) during which one would have succeeded in triggering an over consumption of popcorn and Coca-Cola. However, its inherent methodological limits were so numerous (the distributed film was called “Picnic”; it was very hot; suggestion or not, the Americans always consume these products at the movies, etc.) that researchers such as Eagle, Smith, Spence, Klein (1959), Goldstein, Barthol (1960), Guthrie, and Wiener (1966) decided to go back to a mixed structure, i.e. to a clinical experimentation associated with a situation protocol. In fact, with the technological evolution, researchers were in the process of increasing the clinical performance of subliminal suggestion. Yet, in all logic, the tests confirming and revoking this impact would continue to clash on the basis of somewhat weak foundations¹⁰. A tendency towards the return to psychoanalytic tradition was going to emerge¹¹ before researchers carry out other experiments¹², as if *Science*, a little lost in the medium of this experimental mixture, tested the need to remember the origin of these concepts.

Nowadays, one especially tries to understand and limit the influence of inherent context variables over the suggestive power of advertisement. Research on subliminal suggestion runs out of steam for two main reasons: it is becoming forbidden in more and more countries, and it does not allow any strict control over technological investments, which it requires. Our experiment has therefore consisted of showing this impossibility of control in an environment where, theoretically, the influence of contextual variables must be limited.

2. Experimentation

*“Thus the task is not to contemplate what no one has contemplated yet, but to meditate like no one has ever meditated on what everyone has before his eyes.”*¹³

Our hypothesis is that a visual subliminal suggestion has the capacity to modify a total rate of 20%¹⁴ of the clinical response behaviours of subjects who are divided into two experimental groups, and who were asked to name brands of non-alcoholic drinks, including water, a theme selected completely arbitrarily, simply because, according to Maslow, everyone drinks (the wish to confine us to non-alcoholic drinks aims at discouraging people from alcohol consumption). Moreover, in order to be able to notice this possible modification, also given in a completely arbitrary fashion, it is necessary, a priori, i.e. without subliminal suggestion, to interrogate the first group of subjects – a control group – in order to have a basis for comparison. Once this probability is defined, it becomes theoretically possible to compare the responses of the control group members with those of the subjects who have undergone a subliminal suggestion (experimental group), a suggestion that theoretically encourages them to give different subconscious responses.

¹⁰ Byrne, 1959; Key, 1974.

¹¹ Saegert, 1979

¹² Droulers, 1996; Trappey, 1997.

¹³ Schopenhauer, 1992: 58

¹⁴ The results of the New Jersey experiment claim to have reached this threshold.

The observation of a substantial difference between the answers of the control group and those of our two experimental groups means that even the nature of the answer obtained was artificially modified. In other words, the subliminal suggestion has a quantifiable impact on the response behaviours of certain subjects in the experimental groups. In this case, let us recall that the subjects must name the first five brands of non-alcoholic drinks that come to their mind.

The preliminary investigation is conducted on 159 students who agreed to answer this written question, separately, under our surveillance and their teachers'; the latter are not questioned. The subjects of the control group are organized in four groups for the first-year students and in three groups for second-year students, and they are set up in various rooms at the University of Nice.

Let us recall as well that the objective of this investigation is to determine a threshold of brand recognition. The parallel products of "Coca-Cola Light" for Coca-Cola or "Orangina Sanguine" for Orangina, for example, are not regarded as independent brands because of the need for making a distinction between product and brand. These rare examples are thus integrated into the "mother brand" in order to be taken into account. With the end of this short investigation, the nature and frequency of their consumption are as follows (brand cited in X% of the cases):

➤	Coca-Cola (+ Light)	95.60 %
➤	Evian	66.04 %
➤	Orangina (+ Light & Sanguine)	60.38 %
➤	Perrier (+ Fu)	39.00 %
➤	Pepsi-Cola	27.03 %

This first measurement shows that the five most frequently cited brands by the students among the 39 brands represented are as such, in a descending order: Coca-Cola, Evian, Orangina, Perrier, and Pepsi-Cola. These results logically confirm the immense popularity of the most important market brands of non-alcoholic drinks, hence the probable legitimacy of the provided answers: the students are, indeed, the first consumers by means of vending machines which are established in their direct environment of studies and highlighted with the colours of these brands.

We then insert in a musical video clip the command to name the syrup brand Teisseire. The latter, somehow well known, was selected because it did not appear at the time of the preliminary investigation. The subliminal image, in this case, emitted at a speed of exposure, accentuating the feeling not the perception, is $1/25^{\text{th}}$ of a second, which appears every 15 seconds in the clip. The duration of the clip being 4' 09 can thus be projected fifteen times in a single session. Because of the nature of our experimental groups and their timetables, it is impossible to consider several times of passage.

We suggest then this command, carried out in a visual subliminal way, to two independent experimental groups under the pretext of finding a clip which could be used as support for an advertising campaign against AIDS. The first group consists of 95 students, the second of 58. Seven months separate the two experiments. Concerning the first experimental group, the nature and frequency of their consumption are as follows:

➤ Coca-Cola (+ Light)	83.16 %
➤ Evian	57.89 %
➤ Orangina (+ Light & Sanguine)	42.11 %
➤ Teisseire	33.68 %
➤ Perrier (+ Fu)	29.47 %

It should be noted not only that the suggested brand now forms part of the five brands most frequently cited, but also that this one is cited **before** Coca-Cola in 46.88% of the cases. The perceptible fall of the percentage rates for the first cited brands is explained thanks to the new distribution of the consecutive answers relating to the appearance and integration of the item "Teisseire".

An independent statistical analysis¹⁵ will reveal to us that the subliminal suggestion is probably able to modify clinical response behaviour, no longer at a total value of 20% but at a total value of 30%. It is on the basis of this new hypothesis, and under similar conditions, that we suggest, therefore, the same command to the second experimental group seven months later. These new students (the nature of the second experimental group formation is different from that of the first, i.e. Management students vs. Information & Communication students) were certainly not influenced by the market just like the first were not influenced by their environment, and this is due to two main reasons. The first is that Teisseire did not market new products or new packaging during the period that separated our two experiments. The second is that the experimental subjects never consume syrup; they prefer sodas, which are freely consumed within their university establishment as well as during their evenings when they are mixed with alcohol. The nature and frequency of their consumption are then as follows:

➤ Orangina (+ Light & Sanguine)	14.08 %
➤ Coca-Cola (+ Light)	19.37 %
➤ Evian	11.97 %
➤ Badoit & Pepsi-Cola	05.99 %
➤ Teisseire	05.28 %

We can affirm that the suggested brand forms again part of the five most frequently cited brands, with a consumption level close to that of Pepsi-Cola; moreover, this one is once again cited before Coca-Cola in 20% of the cases. As for the independent statistical analysis, it will reveal¹⁶ this time that our new hypothesis is certainly more realistic than the first.

¹⁵ This independent study is based on an analysis of chi-square. It reveals that the indicator is equal to 8.89, which suggests that our assumption is not optimized; indeed, according to these results, we can increase its requirement degree. So chi-square indicates that the subliminal suggestion is probably able to modify a clinical response behaviour, no longer at a total value of 20% but at a total value of around 30%.

¹⁶ The second independent study reports a chi-square equal to 0.24, indicating that the new hypothesis, i.e. arriving at a behavioural modification higher than 30% of the results provided by the preliminary investigation is certainly more realistic than the first.

3. Discussion

It is undoubtedly the motivation study – motivations which are possibly at the origin of the subjects' responses, the subjects belonging to the two experimental groups - which seems to be the most significant when it comes to the identification of the limits inherent to experiments of such nature. Indeed, with the reading of our results - quantified hereafter starting from averages drawn from the two experimental groups, the results being numerically very close - one can observe the emergence of six quite distinct groups:

- A first group, accounting for 9.05% of the answers, identifies the subjects who did not notice anything in the film and who did not cite Teisseire either.
- A second group, accounting for 2.78% of the answers, identifies the subjects who did not notice anything in the film but who cited Teisseire all the same, that which seems to indicate that the subliminal message had a subconscious impact on their behaviour.
- A third group, accounting for 22.75% of the answers, identifies the subjects who believed to have seen "something" in the film that they did not identify and who did not cite Teisseire: these subjects explain why they saw "flashes" throughout certain parts of the video. With the selected clip having such characteristics from the beginning, it would seem, to be strictly accurate, that the subjects did not make any distinction between the flashes due to the subliminal images and the flashes inherent to the structure of the clip.
- A fourth group, accounting for 2.44% of the answers, identifies the subjects who saw "something" that they were not able to identify but who cited Teisseire all the same. This result is comparable with that of the second group because with the identification, being too vague for rejection or acceptance on behalf of the subjects, one can consider that the subliminal message also had a subconscious impact on their behaviour.
- A fifth group, accounting for 38.43% of the answers, identifies the subjects who consciously perceived the message but were placed in a position of rejection for not quoting Teisseire. The majority of the subjects found themselves in such a situation because one of them detected the presence of subliminal messages and was naturally put himself in a state of defence by means of a conscious vigilance, which resulted in monitoring the appearance of a new message. The images of the clip then completely passed to the second level as regards attention. This attention is only that of the subject concerned, being naturally focused on an identification exercise for subliminal images with the objective of validating the first detections, essentially dubious, and of discovering a ludic aspect in the exercise. Having orally reported the discovery, which would certainly not have been the case at the time of a projection among people unknown to each other, many subjects automatically appeared as soon as a new subliminal image appeared. This perspective is inevitable within the framework of a clinical experiment made up of subjects who know each other, which is the case within formal groups like students. The target here has therefore helped the projection of subliminal images as a simple spectator and the behavioural impact, since there was one, resulted in a

refusal to name the Teisseire brand, a rebellion against a requirement or a command. This explains such a percentage, but also underlines the assumed suggestibility degree of the subliminal image, which modifies, in spite of everything, almost 30% of the targets' response behaviours. Furthermore, we are now certain that whatever the number of people, there exists a strong probability for at least one person to notice a visual subliminal suggestion in a conscious manner. Let us recall for this reason that the subliminal image is not *invisible*; it is simply *dissimulated* in order not to be given priority during the selection process guided by attention.

➤ A last group, accounting for 24.55% of the answers, identifies the subjects who clearly perceived the message but were nevertheless placed in a position of acceptance by citing Teisseire at the time of responding to the questionnaire. In this case, the subliminal images were detected and identified but, contrary to the preceding group, it is behaviour of acceptance that arose. Moreover, if one compares this information with that related to the command of naming evoked brands (cf. supra), one notes that this behaviour of acceptance has, moreover, allowed the citing of Teisseire firstly, before Coca-Cola when the brand was actually mentioned.

A final analysis relates to the perception thresholds of various individuals from our two experimental groups: at the time of identification, the subjects of the fifth and sixth groups did not all perceive the same things: 19 of them read "At Teisseire", and more rarely "It is Teisseire"; others answered that they had seen brand names, or "Teisseire Syrup"¹⁷. Obviously, perception played its usual part of modifying certain realities because, following the example of Gestalttheorie's¹⁸ theses, certain subjects did not see what was there, whereas others saw what was not.

In short, if one devotes himself to a last quantified comparison, one notices that of the 99 subjects who identified the message (members of the fifth & sixth groups), 52.16% of them - the majority - located only the term Teisseire in the message, 24.45% brought back a complete but false message (i.e. "It is", "At", etc instead of "Citez"), and the remainder, 23.39%, succeeded in identifying the message in its entirety: "Citez Teisseire". A last point finally deserves to be underlined: orthography. The Teisseire brand has the distinctive characteristic of comprising the successive letters "ei" twice. We know that, in the French language, in front of two consonants, the "e" is pronounced « é » (e) or « è » (ε). It is thus normal that when one questions the orthography of Teisseire, the solicited person omits the first « i », persuaded that the presence of both « s »es is enough to create the sound « é » of Teisseire. We could discern this feature at the time of a pre-investigation to our experiment: it revealed that more than 90% of the questioned people, in spite of their education and knowledge of the brand, did not put an "i" after the first "e" when asked to spell the name of Teisseire. What is disconcerting, even if we had not thought of testing this aspect at the time of the definition of our experimental protocol, is that the totality of subjects who cited the Teisseire brand in their response after our subliminal suggestion correctly spelled it.

¹⁷ The original words were: "Citez Teisseire", i.e. "Name Teisseire"

¹⁸ Guillaume, 1979

What is even stranger is that, when, at the end of the test, we arbitrarily asked for some subjects to justify the reason for which they had cited Teisseire, their answer was unanimous: "I do not know anything about it..."

Conclusion

It seems that the influence of collective diffusion depends on the role of four main factors: the source, the message, the instrument, and the subjects. In his study of a case of collective persuasion, Merton (1946) stressed that what we can expect often occurs: we confide in trustworthy people, and we defy the adversary and the stranger. But this is not always the case: in the long term, the memory of the source is erased, and information, true or false, produces its effect. Whatever the types of suggestion, the comparisons are always very delicate, sometimes even completely lacking in direction: the public ones are different and they never occur under the same conditions. Moreover, we cannot simultaneously compare all aspects of influence: to draw attention, to retain it, to provide information, to modify opinions, or to determine behaviours. On the other hand, a certain number of generalizations appear to emerge from the study of participants subjected to the subliminal diffusion of information and ideas. Certain personality factors certainly produce definite effects: for example, a low regard of oneself surely makes the subject more impressionable.

The objective of this article is to present a short epistemology of clinical experiments relating to subliminal suggestion and an experimental protocol which puts forward the interference of context variables as regards clinical experimental framework. Traditionally, where clinical experimentation makes it possible to preserve cross-sectional influences, it seems that that is not the case within the protocols of the subconscious nature. The results of our experiment suggest that it is necessary to lay careful reserves when it comes to the procedure conditions and the nature of the experimental groups. In our case, the fact that our subjects knew each other involved a categorical perspective: those participants did not hesitate to react orally to the sight of unexpected flashes, thus exciting the curiosity of the more passive subjects. Perhaps, this would not have been so explicitly the case under more anonymous conditions. What's more, one of the two experimental groups followed a university training specializing in information and communication. This training sensitizes its students to the top media techniques, where a sharp glance is inspected according to a procedure like ours.

As for the environment in which the experiments were conducted, it was far from generating the same variety of peripheral noises as that which exists in media more realistic than hypermarkets, and therefore more hostile. Consequently, the real capacity of subliminal suggestion remains ignored nonetheless, even if we have good reason to believe that it should not be ignored in terms of communication. The most convincing results still depend on serious verification of the identification and measurement of many contingent variables.

Nothing today enables us to verify or revoke the fact that information can subconsciously be suggested through a controlled flow, and that it has an unquestionable and measurable impact on a subject's behaviour. Otherwise, it can involve a response from certain subjects, which might be recurring consecutively with a later identical stimulation, and that is something we are unaware of. The use of subliminal messages for diagnostic purposes thus remains, for the moment, only based on the assumption according to which the subliminal representation of certain stimuli and utterances is able to activate the conflicts that are related to various psychopathological disorders, or certain faded states of consciousness.

REFERENCES

Allport, F.H. (1955). *Theories of Perception and the Concept of Structure*, John Wiley.

Bagot, J-D. (1996). *Information, sensation et perception*, Armand Colin, Paris.

Beatty, S.E. and D.I. Hawkins (1989). Subliminal Stimulation: Some New Data and Interpretation, *Journal of Advertising*, Vol.18 (3), pp. 4-8.

Channouf, A. and A. Rouibah (1995). The Effect of Non-conscious Perception of Frequent Stimulus on Credibility Judgement, *International Journal of Psychology*, Vol.30 (2), pp. 213-235.

Cuperfain, R. and T.K. Clarke (1985). A New Perspective of Subliminal Perception, *Journal of Advertising*, Vol. 14 (1), pp. 36-41.

Dixon, N.F. (1971). *Subliminal Perception: The Nature of a Controversy*, McGraw-Hill, London.

Droulers, O. (1996). La perception subliminale des marques, *Actes du XII^e congrès de l'Association française du marketing*, Poitiers.

Eriksen, C.W. (1956). Subception: Fact or Artifact?, *Psychological Review*, Vol. 63, pp. 74-80.

Goldiamond, I. (1965). *Statement on Subliminal Advertising*, in *Control of Human Behavior*, in R. Ulrich and al., Glenview, Scott Foresman.

Goldstein, M.J. and R.P. Barthol (1960). Fantasy Responses to Subliminal Stimuli, *Journal of Abnormal Social Psychology*, Vol. 60 (1), special issue.

Guillaume, P. (1979), *La psychologie de la forme*, Champs Flammarion, Paris.

Guthrie, G. and M. Wiener (1966). Subliminal Perception or Perception of Partial Cue with Pictorial Stimuli, *Journal of Personality and Social Psychology*, Vol. 3, special issue.

James, W. [1909] 1915, *Le courant de la conscience*, in *Précis de psychologie*, Félix Alcan, France.

Leibniz, G.W. [1703] (1966). Les petites perceptions, in *Nouveaux essais sur l'entendement humain*, Garnier, Paris.

McConnel, J.V.; Cutter, R. and E. McNeil (1958). Subliminal Stimulation: An Overview, *American Psychologist*, Vol. 13 (3), pp. 229-242.

Neisser, U. (1967). *Cognitive Psychology*, Appleton Century-Crofts, New York.

Saegert, J. (1987), Why Marketing Should Quit Giving Subliminal Advertising the Benefit of the Doubt, *Psychology and Marketing*, Summer issue, pp.107-120.

Schopenhauer, A. (1992). *Le monde comme volonté et comme représentation*, traduction A. Burdeau, P.U.F., Paris.

Trappey, C. (1997). Une méta-analyse du choix du consommateur et de la publicité subliminale, *Recherche et Applications en Marketing*, Vol. 12 (1), pp. 89-98.

Watson, J.B. [1924] (1972). *Le Behaviorisme*, C.E.P.L.-Retz, Paris.