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Subliminal Information Theory Revisited: Casting Light on a Controversy



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Abstract

Subliminal information theory proposes that information is not only processed without awareness, but that it is also acted upon without awareness. Some research suggests such information is even prioritized over other forms of information processing. Where there remains some controversy over the extent or nature of the behavior that can be influenced by subliminal messages, there is little doubt that properly presented subliminal information is processed, retained, and acted upon. Contrary to popular opinion, the literature and evidence supporting subliminal information theory is robust. Indeed, meta-analysis clearly demonstrates very strong statistical support for this modality of care. There are many areas of research remaining to further enable taking advantage of subliminal information processing; however, because of the mis- and dis-information in the public domain, many scientists avoid this area, because of either a lack of knowledge or a fear of the kind of criticism that can influence careers.

Casting Light on a Controversy

A recent telephone conversation with a television producer who is filming a special on the uses and abuses of subliminal communication brought to mind how little has actually changed since the first congressional hearings on the subject in 1984. There are still no laws necessarily protecting the public; although the state of Nevada did give rise to a constitutional interpretation by Judge Whitehead in the Judas Priest case in Reno. In his opinion, the presence of a subliminal message without informed consent constitutes a violation of the First Amendment.

Subliminal communication is still misunderstood, and an abundance of disinformation regarding its efficacy remains. In addition, there can be significant disagreements about the definition of subliminal communication. For the purpose of clarity in what follows, Wolman's categories are offered here.

Definition

There are general categories applied to the definition of subliminal communication through any media. Professor Benjamin B. Wolman's modified categorization of subliminal stimuli divides descriptive values into four criteria of awareness and unawareness (1973). The stimuli are as follows:

Is It Subliminal?

Charlyn Ingwerson, Assistant Editor



It matters what we call things. Most of what is called “Subliminal suggestion,” isn’t. Take the advertising media, for example.

“Everyday, an estimated 12 billion display ads, 3 million radio commercials, and more than 200,000 TV commercials are dumped into North America’s collective un-conscious” (Lasn, 1999). But, advertising that works must appeal to some aspect of our personalities. Just because we are unaware of, or do not wish to admit to the particular inclination to

which an advertisement may make its appeal, it does not follow that the successful appeal will require a “subliminal suggestion.” Let’s face it: human rationality is contested by the all too human wish for unreason. Advertising is predicated upon this wish.

To make a claim of subliminal suggestion is to say that something not otherwise a part of your personality has been suggested/inserted into your personality by a source that is not you. Some advertisements certainly exploit aspects of human weakness or flaws of character or reveal secret wishes, but these things have not been planted, as it were, from the outside, but originate from within.

We hold both the advertising and entertainment industries suspect, and we wonder, “Are we perniciously influenced beyond our cognitive wills to do that which is suggested by messaging deliberately posited beneath cognitive recognition?” The observation has been made—ad nauseam—that “sex sells,” but the appeal is one of human interest, sometimes illicit, and not a suggestion of non-human na-

ture. Public reaction to the use of subliminal suggestion has erupted when the nature of that which has been allegedly suggested by subliminal means is antithetical to the ideals of humanness or humanism (e.g.: the anti-civility of a child’s premature exposure to sexual content). But such meanness hardly requires a subliminal medium. Though far from ideal, it is utterly human to act, not only in one’s own self interest, but also with guile. Most religion is predicated upon this.

Do advertisers and rock stars use subliminal messaging (insert images or messages into frames of visual or audio media)? You bet. But professor John R. Vokey notes a “fallacious confusion between the simple demonstration of the use of subliminals . . . and the conclusion that they are therefore effective” (Vokey, 2002, p. 240). Some of the confusion is definitional in nature: What does “subliminal” mean? Vokey writes: “the term ‘subliminal’ is derived from the construct of a ‘limen of consciousness,’ a threshold or line separating conscious from unconscious. The concept

1. Below the level of registration
2. Above the level of registration but below the level of detection
3. Above the level of detection and discrimination, but below the level of identification
4. Below the level of identification only because of a defensive action

Although these categories seem clear, the failure to use these definitions in actual research designs, replications, and subsequent reports constitutes a large portion of the disinformation that exists and surrounds the subject today. It is this author’s belief that much of that disinformation was generated intentionally. A personal look at some controversies in recent history should help clarify this assertion.

History: The Judas Priest Trial

The case involved two young men who, after drinking a few beers while repeatedly playing the song “Better by You, Better

Than Me,” from the *Stained Class* album by Judas Priest, took a shotgun to the playground and shot themselves.

These two teenage boys had had difficulty adjusting to life. Ray had just split up with his girlfriend. James had just lost his job. Neither of them was blameless. Both were confused.

Two days before Christmas, Ray gave James a gift of music that had particular significance to the boys. James had once collected the music of this particular artist, but when he found the music violated his Christian beliefs, he threw it all away. That was a few years before, and James no longer pursued any religious affiliation.

The boys decided to play the album while they drank beer. The words and music of one song held their interest. They played it repeatedly. The lyrics in several songs encouraged suicide with such rhymes as “Leave this life with all its sin. It’s not fit for living in.”

Picture these two young men: attractive, on the slight side—skinny, according to more than one description—unskilled, not doing well in school, anticipating a life of difficulty, and with delusions of grandeur driven by frustration, pretending to be mercenaries, or imagining themselves as heroes.

By mid-afternoon, the lyrics going around in their heads included, “Why do you have to die to be a hero?” The two looked at each other as though acting in some movie. The hero says, “Let’s do it!” just before mayhem begins. One of the boys said, “Do it!” The two began chanting, “Do it.” One of them grabbed a shotgun. They went out the bedroom window to the church playground. Ray placed a shotgun under his jaw. James chanted, “Do it!” Ray fired the gun. The blast stunned James. Ray was dead.

James lifted the gun, wet with blood. He said later that he trembled. He felt afraid. He could be blamed for Ray’s death. He

dates back to the literal beginning of psychology as an empirical science separate from philosophy" (Vokey, 2002, p. 240–241). There are two problems:

First, contrary to the common caricature of psychology in the popular media, no modern theory posits "an unconscious," . . . Rather, perceptual and cognitive processes can and often do occur without our awareness, and without our having to or, in many cases, even being able to consciously control them.

. . . The important point is that these processes may occur unconsciously—that is, without all the internal chatter that normally accompanies what we refer to as "conscious" processes, but there is no reason to suggest that they therefore occur in some special mind-place called "the unconscious" . . .

Second, few current perceptual or cognitive theories hold to the idea of an absolute sensory or information threshold dividing those events we are aware of from those we are not. Rather, it is viewed as a con-

tinuum. (Vokey, 2002, p. 241–242) It comes to this: Is the unconscious a 'place' or a 'process'? Vokey makes an authoritative case for the latter, concluding:

if it can be shown for some event that it is above observers' objective thresholds, and if it can be shown that it is simultaneously below their subjective thresholds (and we are willing to accept that being below the subjective threshold completely exhausts all possibilities for awareness), and if we can show some effect on the observers' behaviour consistent with the meaning of the event that doesn't also occur in the absence of the event, then, we would have a demonstration of subliminal perception and subliminal influence. (Vokey, 2002, p. 243)

"None of the popular claims for subliminal influence," he writes, "come even close to meeting this criterion" (Vokey, 2002, p. 243). He adds however, "this does not mean that unconscious perception does not happen, only that it does not happen without concomitant awareness" (Vokey, 2002).

To say that the rational free will of human beings can be subverted, either intentionally or unintentionally, puts one on an ethical slippery slope concerning questions of personal responsibility. Am I responsible for my spending if I am merely a victim of the advertiser's barrage of subliminal messages exerted upon my subconscious against which my rational mind is no match? Morality is premised on both rationality and free will, and to assert that subliminal suggestion can circumvent these is an idea any despot could love.

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wondered why they had chanted, "Do it." He placed the gun under his own jaw. He pulled the trigger.

But James failed to brace the shotgun, and as he pulled the trigger, the gun lurched forward. The blast shot off the front of his face, but did not kill him. It left him severely wounded and disfigured, but he lived for nearly 3 years.

Although it was an unpopular position, it seemed, after reviewing the case, that the subliminal command "Do it!" was a causal factor in the double shooting. The interest is not in the details of the case, but rather in the birth of a scientific controversy. Prior to this case, Congressional hearings in 1984 had led to the most significant source of scientific controversy, which was simply whether a subliminal message could affect behavior. Lloyd Silverman said yes; Howard Shevrin was doubtful (Taylor, Sadana, & Bey, 1990). In the Judas Priest case, Shevrin switched positions based on newer

research and agreed that the subliminal "Do it" command was a causal factor (Taylor, 1995).

The actual controversy began with a study conducted by a marketing student. This study on the influence of labels was being announced everywhere—from *Seventeen* magazine to prime time news. The study purportedly proved that subliminal messages did not work to influence behavior. The details of this study and the Congressional hearings can be read in *Thinking Without Thinking* (Taylor, 1995).

A greatly respected psychologist supervised the study. Unfortunately, the study itself did not achieve what the media or the pundits who sided with CBS claimed it did.

By design, the study evaluated the influence of labels on the consumer. To do this, the doctoral student who set up the research project sought and obtained subliminal audiotapes from five different com-

panies. The tapes were of two kinds, one to improve memory and one to build esteem. The labels on the tapes were then changed so that the esteem tapes were labeled memory and vice versa. The pre-test instruments measured memory and esteem. After the test period, subjects were brought back and tested for actual improvement. Subjects who thought they were listening to memory subliminal messages reported an improvement in memory and subjects who believed they were listening to esteem messages reported an increase in their esteem. The instruments failed to identify a statistically meaningful change in either. It is fair, at this point, to state a definite label influence; however, this does not contribute to a real effect regarding subliminal communication.

The five tape companies all claimed different methods and messages for their programs, including messages in the second person and messages in the first person.

Audio analysis failed to recover messages on any of the programs. According to an affidavit from the sound engineer, at least one major manufacturer of audio subliminal programs mixed messages 40 decibels beneath the carrier (music or ocean sounds). This is beneath the theoretical limit of most players. In other words, the signal strength might be compared to the influence of a whisper two blocks away. It might be that the messages were not recoverable because the secret method used included such a mixing procedure. Other companies used questionable affirmations and in other ways produced material that differentiated one company from another. All shared the label *subliminal*, but that certainly did not mean they were the *same*.

An example might clarify the importance of this difference. Assume a scientist pressurizes a trapped atmosphere to, say, 10 atmospheric pressures, applies an exact electric charge, and then heats the result. To replicate this study, a researcher would determine the nature of the atmosphere that was trapped and replicate the process, including the exact degree of heat and electric current applied. Now assume that someone attempts to replicate the study by catching room atmosphere in a fish bowl and covering it with plastic wrap so it is trapped. He places a 9-volt battery inside the fish bowl and then heats it with a cigarette lighter. This is hardly the same experiment. Now take it a step further. Imagine that five fish bowl makers all use different elements but claim the same outcome. Is testing all five bowl makers the same as replicating the original study? The answer is clear: No! Even if one of the bowl makers has it right, the other four would contaminate the outcome.

This was not a scientific study with a single variable. The study mixed multiple variables and came up with a single conclusion—and that is simply not good science. Nevertheless, this study was everywhere in the media, and those testifying for CBS and Judas Priest were touting it almost as if it were the Holy Grail.

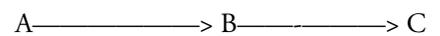
This case comes down to a few facts. Judas Priest admitted to putting subliminal content on some recordings, but not on this one. When the messages were demonstrated to be present, the counter argument was that it occurred only as a “coincidence of sound.” CBS was fined more than once by the judge for impeding the discovery process and manipulating the press. The original disclosure of the boys chanting *do it* was made by CBS Records. However, CBS’s own investigator, a former Scotland Yard detective, stated that he was unable to locate the original 24-track master and that he was never allowed to look in the CBS vault. The original master was needed in order to prove the message was not a coincidence of sound. In a wrongful death action, intent must be demonstrated.

The result of the press attention and managed or manipulated media gave rise to the real scientific controversy. Since then, the power of subliminal messages to influence behavior has been admitted by some of the people who were the most outspoken while defending CBS’ position. Even the *Skeptical Enquirer*, a science journal with a history of dismissing many things later proven to be true, admits evidence for behavior changes because of subliminal stimuli (Epley, Savitsky, & Kachelski, 1999), although the journal had published many articles supposedly debunking subliminal influence during and following the Judas Priest trial. The definitive work of Robert Bornstein and his meta-analysis approach shows clearly that a properly delivered (signal strength) psychoactive message (affirmation) can and does influence behavior (Bornstein & Masling, 1998). Bornstein posits that the effects of subliminal stimuli on humans, including behavior, is robust in the literature.

The literature contains hundreds of research findings suggesting the efficacy of subliminal messages; yet a literature review is not the only support for this theory. Personal experience shows no doubt that subliminal information is processed and acted upon. The author’s research on InnerTalk, an audio dichotically-presented

subliminal method, includes more than a dozen double-blind studies conducted by independent researchers at leading institutions throughout the world and on several domains ranging from attention deficit hyperactive disorder to examination anxiety. The model is simple and was first put forward by Albert Ellis (1988).

The A-B-C model, as it is called, is graphically depicted as follows, where *A* is the *activating event*, *B* is the *belief* that *A* leads to, and *C* is the *consequence* of *B* in emotional and behavioral terms:



An activating event, stimulus, or verbal affirmation affects belief, which equals emotional and behavioral consequences. It is easy to see this rather linear in-and-out when looking at the negative input in our lives, and it works more or less in the same way with respect to the positive. Ellis coined a term for negative self-talk that is best known as ANTS—automatic negative thoughts.

During the Judas Priest trial, the author was asked if he had ever conducted a research design that indicated a person would kill himself as a result of a subliminal message. “Of course not,” had to be the answer. It is hoped that no scientist would even consider doing such a thing. Then an idea came: What if a person received a subliminal message of danger?

A pilot study was arranged through a science project at a local high school. Group A listened to ocean sounds with three subliminal information deliveries spaced approximately one minute apart. The messages were “Danger, danger, watch out!—Ah-h-h-g-h! Danger!” The messages were recorded and delivered simultaneously in both forward and reversed speech. Group B listened to the same ocean track with the message “People are walking” delivered subliminally.

Both groups listened to the tapes for four minutes, with earphones, while their body responses were monitored for changes in breathing, blood pressure, the electrical resistance of their skin, and the moisture

at the end of their fingers. A four-needle polygraph, commonly known as a lie detector, recorded these responses.

After the 4-minute trial, each subject responded to a questionnaire that included a request to report any particular reverie, feelings, or thoughts that occurred during the trials. Only then did an assistant reveal to the subject which group he or she was in.

All five of those in Group A responded with gross reactions or changes in the measurements of their body functions coinciding with the delivery of the subliminal *danger* message. Those in Group B had no such response. This suggests that the participants in Group A recognized the danger stimulus. The subjects' bodies in Group A responded as though an actual danger existed, as did their minds. Three of the five participants in Group A reported reveries of killing or being killed. A fourth person reported feeling extremely upset. The fifth said she was too occupied by what the experimenters were doing to notice her thoughts, although the experimenters were doing little.

Psychological theory has categories of fantasy formation. Our response to danger, the fight-or-flight response, can generate compelling fantasies. When a person feels threatened, his or her fight-or-flight response gives rise to thoughts of this nature. Killing is fight oriented, and death may be flight oriented. Many deal with fear, in fantasy, by neutralizing the source of the fear—even if it means killing. Dying, on the other hand, means escape to many. Of five normal, healthy teenagers, four had thoughts of killing or dying. The fifth apparently *blanked out*. This came from listening, in a pleasant and sober state, to a few repetitions of a single, simple, subliminal message for a few minutes.

Those who heard the message *people are walking* had reveries similar to "I was at a sunny beach, and there were a lot of people."

This study has been posted, together with all needed materials, including downloadable sound files, as an academic challenge at

www.americanpsychotherapy.com

www.progressiveawareness.org. No one has run the study with a different outcome.

Today, the science of subliminal communication is still poorly understood by many, but it is a true science with valid merits. It can assist in enabling individuals to overcome the doubt, fear, and negative input that all too often create self-imposed limitations. It is a powerful take-home modality that the therapist can add to his or her resources. Many clinicians do just that. My office has received many reports from health-care providers attesting to this. One doctor reported increased improvement with patients dealing with many different health-care issues when using a subliminal audio program as a take-home care modality. In his words, "Basically my patients get better faster when they use InnerTalk in addition to the rest of their treatments as compared with similar patients who use only 'traditional' treatment methods" (Taylor, 2007).

Conclusion

There are many potential applications where the use of subliminal technology could be beneficial. A quick review of the literature suggests that this technology can be helpful in areas as diverse as learning something to oncology care (Taylor, Bey, & Sadana, 2000). The research designs often provide very good models to follow and as often suggest possible improvements. For example, some treat an audio message as though it were a written message; therefore, it is not subject to the qualities expected in meaningful voice delivery, such as inflection, tone, sincerity, and so forth. In other words, a computer-generated voice is thought by some to be as effective as a real human voice. The answer to this and many other questions is unknown because the research has not yet been done.

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