

# Balkanization of a Psycholinguistic Interface

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## Abstract

People say the infants either sleep or play, but educators believe that, they either learn or sleep because it's a universal fact that children start learning since infancy. There are various kinds of learning methods embedded in the manuscripts since ages. Here are a few examples. Driving a car, riding a bicycle, learning a language are the premier examples of unconscious learning, in other words, learning not by using any consciousness or cognitive sense, where major portion of learning is by means of unawareness, which can be said implicit learning. During the period of learning / non-period of learning, say for example during childhood, in view of ESL, if a child happened to see a grammatically mistaken words of a hoarding every day or happened to hear a wrong phrase every time, obviously learns the same error from his surrounding environment and the same error is going to be continued throughout his life depending on some specific assumptions such that there is no opportunity for the child to realize what s/he has been using is grammatically wrong. For supposition, it is not a conscious learning process as the child hasn't been paying any attention to learn. As a consequence, it can be considered as unconscious learning process. That being so, this study aims to focus on the study of a learning process this exemplar belongs to. Conscious? Unconscious? or is there any novel sort of learning working in this instance? Therefore, in the subsequent sections, this paper is going to discuss the relative theories involved in this epitome along with the knowledge sought during discussion. By providing appropriate suggestions, the study contributes to regulate what is exemplified above.

**Index terms:** attention, conscious, learning, unconscious, etc.

## Introduction

The exceptional characteristic feature of humans is possessing the ability of cognition to learn from the surroundings. This is directly proportional to the demand or necessity of the location or situation, if not environment. This ability is a kind of perception or thought process which includes learning. Learning is an important feature and an incessant process in human brains. To be fact, considering the word 'learning', it cannot be done by unconsciousness. Wikipedia reference shows that learning with unawareness and without any intention is called Implicit learning. Ronald P. Leow defines it as a learning process that takes place with unawareness at the point of learning. By Jan H. Hulstijn Krashen (1978, 1981), it is a very commonly shared information in the literature about implicit learning and the knowledge referred is unintended learning. Also, the examples like 'bicycle riding' and 'swimming' don't need any consciously accessible knowledge. Generally, educational psychologists work with dichotomies, here the pair is, 'Conscious' and 'Unconscious' vs. 'Implicit' and 'Explicit'. Jie Jin (2011) states that these both, conscious learning processes and unconscious learning processes are important for language learning.

## Research question

This study aims to focus on what learning process is involved in the aforementioned exemplary situation. Therefore, the research question is as follows:

Q. "Is that child mastering the mistake by using several attempts without knowing that he is practicing an error?"

## Associated Theories

Richard A. Schmidt's Schema Theory explains about 'discrete perceptual motor skills.' These skills constitute perception of understanding. It happens by using senses, reaction and by using body muscles. Visual scene recognition, moment of muscles, coordinated movement like a sort of intelligence, expertise, mastering, and reverse reading of a script are typically belonging to motor skill. Further, Schema theory states that the motor action is precise and repetitious, yet, when it lacks practice, it won't provide sufficient information to the learner to understand the rules of certain activities. Per J.A. Adam's theory (1971) of skills acquisition there are two important traces, the former is a Memory trace that chooses the response initiation and the latter is a Perceptual trace which functions as a record of past moments after many practices. The above

prototypes are not only similar to Adam's perceptual trace but also similar to Reber's (1965) conscious attempts. The studies of cognitive neuroscientists, Reber, Allen, & Reber, 1999, Squire & Knowlton, 2000, Ullman, 2005, recognized some areas in the brain which are collaborating with implicit and explicit knowledge of the language.

### Hypothesis

This is to expect a proposition, such as, a bridge between conscious or unconscious processes that aims in learning like Adam's skills acquisition. Another alternate is, in general when the solution doesn't lie in either 'yes' or 'no', it might be possible 50 percent each. Also, it is to emphasize that when there is half and half chance for 'either' and 'or', there is possibility for the 'both' as well. As assumptions are many, the study is endeavored to study underneath the knowledge of scientific light.

### Consciousness

Consciousness is necessary to remember past events. There are some arguments in the literature that learning needs attention. If not attention always, at least awareness, is needed to learn. An action, learning, done with consciousness means it is with individual awareness. Reber, (1965) exclaims that Implicit learning is a procedure for acquiring the knowledge through self-regulating conscious attempts and it is highly in the absence of explicit knowledge as it is an important 'root' process at the center of adaptive behavioral selection. Notwithstanding that, learning with awareness at higher levels is explicit learning. Per Reber, (1967), the term 'explicit learning' is a process where the learner gets conscious knowledge using 'interested learning habits' like 'concentration' in more focused learning environment. E.g., memorization of vocab for a test, checking for the answers within the passage provided for the purpose. Bars (1997), defines consciousness as the 'immediate perceptual world' because it includes visual imagery, inner speech and some corporeal moods such as pain and pleasure, emotion and excitement actions, memories etc. A human can experience one at a time during conscious learning. Baars (1997), applies a metaphor to describe consciousness as a bright array of narrow light on a theatre of the unconscious mind, where this narrowness signals the involvement of a physiological concept and attention. Many cognitive psychologists experimented humans for the study of artificial language learning, statistical learning and implied learning. Correspondingly, it is a very clear phenomenon that explicit learning needs consciousness as it needs more focus, much attention and alert alongside concentration. 'Cognitive control' doesn't enhance the acquisition of implicit knowledge, but enhances the expression 'control-improved expression of learning'. Carlson and Dulany (1985), say there is no learning without attention. The essential property of conscious learning is associated with subjectivity, self-awareness, emotions and reflections. So, the point to trace out here is about conscious perception; it occurs without the association of attention whereas conscious learning occurs under the supervision of some unconscious helpers.

### Unconsciousness

A learning action that is done unconsciously means, it is with individual unawareness and it is incidental. Getting unconscious knowledge through implicit learning is an indispensable ability of human cognition as claimed by (Cleeremans, Destrebecqz, & Boyer, (1998); Dienes, (2012); Perruchet, (2008); Shanks, (2005); and Reber, (1993). The word *implicit learning* is first coined by Arthur Reber (1967). Where, Reber, (1967a, 1989a) adds his observations about the things those are suitable to learn through unconsciousness. Characteristically, this learning contains a list of words and its associations. According to his study, Reber explains it as a process, through which the students can gain the knowledge of complex things in a right setting without knowing and with zero efforts. Bruce and Michael support that implicit learning is a normal learning and it is without any intended activity. Some of the archetypal intrinsic learnings are 'The intellect of music', 'Communal interface', 'Taking instinctive decision', 'Language comprehension', 'Utterances, Language production' etc. The word implicit involves innate structures and preverbal procedures for the development of perception, language, and other areas of cognition, Gelman, (1991); Karmiloff-Smith, (1986), (1990). A few psychologists and linguists agree that the result of unconscious processes is a generalization and an abstraction.

A statement by Barsalou and Nick Ellis (1999) show enlightenment of brain involves some important locations for language mechanisms and neural representations to team up phonological constructions with mechanical and physical groundings. Subliminal priming studies suggest that unconsciously perceived stimuli just exceed the activation threshold to trigger control; Kouider & Dupoux, (2004). Natacha Deroost et al. referred Reber, 1993, implicit learning as our 'default' learning system that allows us to gain from environment. The best explanation given by her is, particular successions of speech sounds are learned in implicit way. She exclaimed that unconsciousness is vast and limitless processing.

There are two important angles to look at with this implicit learning. One is the positive side; it makes the learners predict relevant updates from their past implicit knowledge. Second is the negative side; in this the individual may stay with the error what's learned through implicit way of learning. Carol, 1994 explains that the areas of the brain engaged in implicit learning are Basal ganglia, Frontal lobe, Hippocampus and associated areas. Unconscious monitoring supports cognitive control because the data of implicit learning can be accessible during conscious situations. Humans have knowledge to retain what has got through implicit learning, Allen & Reber, (1980); Fendrich, Healy, Bourne, (1991); Mathews et al. (1989); Nissen, Willingham, & Hartman, (1989); Posner & Keele, (1970); Squire & Frambach, (1990) state that this implicit knowledge retains over weeks or years even and the associated explicit knowledge has been faded, hence it is robust. This is the reason A.S. Reber (1989) emphasized that the knowledge acquired through implicit knowledge is at their deepest levels. During Implicit learning, motor skills assist in higher level cognition. E.g., magazine reading, listening to the radio, or watching T.V. programs, films, videos etc. Electrophysiological experiments on brain have shown that there is energetic neuronal activity goes on in our brains without recording on our consciousness. For example, some reflex actions with act first and think later. Fried's work also supported that high level decision making and creativity don't need consciousness. There was a discovery in the beginning of the 20<sup>th</sup> century that some specific skills and knowledge made humans competent to peers and the environment, without involving conscious thought.

### **Sub-consciousness**

As claimed by Arthur S. Reber, "whenever one confronts an issue like the implicit / explicit distinction there is a tendency to 'either-or' problem. He referred it as the *polarity fallacy*". Corresponding to Karen (1982 p.20), acquisition of language is a subconscious process and learning is a conscious process, which can't be an unconscious linguistic knowledge. The language acquisition ( $L_1$  and  $L_2$ ) is unconscious or subconscious. Vocabulary acquisition takes place when the learner notices a novel vocabulary. Unattended stimuli persist in immediate short-term memory for only a few seconds at best, and attention is necessary and sufficient condition for long term storage to occur.

### **Both Unconscious and conscious**

In consistent with O'Grady, (2005), (2012) conscious knowledge is an implicit representation in the form of production procedures, hence explicit  $L_2$  learning does include implicit  $L_2$  learning. Hulstijn, (2002, p.208) expressed that if someone wants to excel their  $L_2$ , implicit learning is inclusive during learning LSRW skills, conceiving a non-interface position. In accordance with Reber (1993) and Krashen, (1994) when the motivation field is complex, implicit is more effective than explicit, whereas the results of Peter Robinson didn't support this claim. One most important thing we need to study here is the essential feature of implicit learning and implicit memory. Carol, (1994) claims the difference between Implicit memory and implicit learning as 'role of awareness' that is not required for 'implicit memory' and conceivably required for 'implicit learning'. It means, implicit learning might take a minute effort in learning but it won't need any effort to become an implicit memory. The two-system theory differentiates implicit and explicit cognition while describing the acquisition of  $L_1$  and  $L_2$ . The Monitor theory proposed by Krashen, (1981) is also a two-system theory that separates the notions that can't be defined into conscious knowledge and unconscious knowledge. Reber emphasized in 2003 that real-life tasks can be regarded as mixed in terms of explicit or implicit mechanisms. That's why, the two terms, consciousness and unconsciousness are notoriously vague terms with many usages. Input of information with focus is absolutely less explicit, but not at all implicit.

### **Subliminal perception**

This is a kind of mental process where perception is below consciousness that means perception happens without being aware of mind. Disregarding the amount of perception, it certainly leads to learning. Schmidt, (1990) exclaims it as a cognitive and social psychological phenomenon, but this learning is almost negligible, which can be activated only when such mental structures are established earlier. Messages played during sleep is one of the best illustrations of subliminal messages.

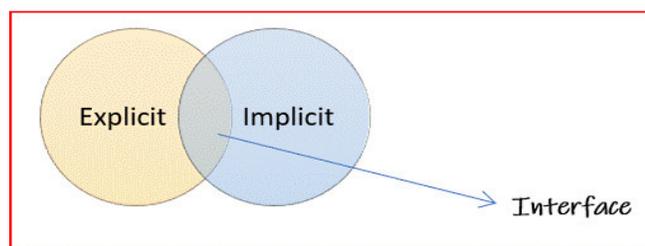
### **Likelihoods**

Awareness at low levels means noticing or visual attention equals to low level of attention, which leads to low level of learning. Noticing something is the beginning of learning. In fact, in reality, low level of learning takes place at low degrees of attention. Posner studies reveal that attention is a controlled and limited process and he used a conforming word to enlighten the meaning of attention, that is, 'detection'. This detection leads to cognition. Velmans, (1991) emphasized

that detection is no way related to awareness as it is dissociated awareness. Attention is detection, but detection is not awareness, it shows that attention and awareness differ at various levels of noticing. Learning without awareness always leads to small amount of learning, Curran and Keele, (1993:192). According to Schmidt(2001) attention is a cognitive mechanism that steers consciousness. Further, Schmidt modified Baar's 'theatre' metaphor; on the unconscious platform, the narrow beam of lighting is compared to attention and the bright spots are compared to consciousness, so concentration can be used whenever necessary to focus on a topic. But some psycholinguists argued that there is no relation between attention and consciousness because of mind wandering. Despite the association between attention and consciousness and attention Koch (2004), argued these as two different psychological concepts. Koch and Tsuchiya, (2007) also alerted that the attention and consciousness are interwoven.

### **Balkanization**

The psycholinguistic dichotomy, what had been discoursing since the beginning was consciousness and unconsciousness. Explicit process is associated with consciousness whereas implicit is related to unconsciousness, the automatic process. There are numerous studies for several years, on explicit and implicit learning processes. Reber identified a novel conception that the studies support both explicit and implicit ways of learning if we study independently. Further, the balkanized study of a Venn diagram about these learnings formed an intersection which he called interface. He emphasized the need formore research in this area of intersection of Venn diagram. R.Ellis (2005), described this interface as strong andweak interface positions.



### **Strong Interface Position**

By learning rule first and transform it into an implicit form converts explicit knowledge into implicit knowledge, R.Ellis, (2005). This is nothing but an implicit learning enigma. DeKeyser Juff, (2005) also paraphrased that this kind of implicit but procedural knowledge is of no use with its existence. Those who mastered L<sub>2</sub> in formal educational training program can't consciously apply grammar rules in their impromptu situations. This underscores the importance of the knowledge learnt in an implicit way. Hulstijn proclaimed that consciousness, explicit, knowledge aids in creating various forms of cognition.

### **Weak Interface Position**

During a learning processes explicit knowledge would be used,R.Ellis, (2005). The knowledge of grammatical rulesassistsacquiring implicit knowledge, e.g., controlled practice. N.Ellis, (2005) claims that the influence level of meta linguistic information is more profound with that of processing.Essentially, both implicit and explicit forms have uses, so reconsidering the study of this aspect is required.

### **Non-interface position**

Stephen Krashen, (2003) claims that consciousness is of secondary importance. Later, Rod Ellis, (2005) proclaimed another interface position to the two existing interface positions. This is called non-interface position. The two acquisitions processes, implicit and explicit, are independent language attainment mechanisms. The knowledge of language gained through these acquisitions will be stored in the brain. As we studied earlier, there is an interchangeability of knowledge from implicit to explicit and vice versa, but non-interface position rejects both the possibilities. This is the reason Krashen declares that the knowledge learned in explicit way, for example, explicit learning of grammar rules couldn't be useful during impromptu situations.

### Summary

If the exposure of knowledge or information would have been the correct one, there couldn't have been a possible study of conscious or unconscious processes in this regard. This statement signifies the recheck of English language holdings in public places such as posters, hoardings etc. and make a scrutiny by language experts before installing them in ESL and EFL countries. Open loop control theory of skills acquisition by Adam, (1971) says about an important stage of feedback in the movements. Response chaining hypothesis claims that there are no modifications to the ongoing moments with a sudden change, it involves a feedback process though. So, feedback is an important aspect during the learning process because every individual won't study language as a major, so they may not get a chance of feedback to recover the subconscious and implicit ways of learning of language comprehension. Thus, in a nutshell, these literary scientific facts suggest the re-verification of English language on societal show ups for the benefit of the future generations and for those who couldn't face feedback.

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