

*Fossilisation in Language Learning: A Review of
Conflicting Research Outcomes*

التحجر اللغوي: تحليل نتائج دراسات متضاربة

Mhamedi Nadir*

Ibrir Latifa*

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Abstract:

Second Language Acquisition research has the goal of providing a descriptive account for the linguistic cognitive, social and psychological factors that underpin the mental grammar development in L2. This query entails addressing the possible inherent limitations that apprehend the acquisition process.

The present study offers a theoretical discussion of fossilisation research and provides a review of the conflicting findings among scholars. One conceivable outcome of the review is that researchers arrive at conflicting conclusion consequentially to an antecedent fundamental difference in the measurement criteria.

Keywords: fossilisation; interlanguage; Critical Period Hypothesis; ultimate attainment.

*Laghouat University_ n.mhamedi@lagh-univ.dz

*Laghouat University_ l.ibrir@lagh-univ.dz

ملخص:

يهدف البحث في مجال اكتساب اللغة الثانية إلى توفير وصف نظري للعوامل اللغوية، الإدراكية، الاجتماعية والنفسية التي تضبط التطورات المعرفية في اللغة الثانية مما يستلزم من الباحثين تحديد القيود الذهنية المتأصلة والتي تجعل من عملية التعلم المثلى غير ممكنة.

تقدم الدراسة الحالية مناقشة نظرية لبحوث التحجر اللغوي وتقدم مراجعة للنتائج المتضاربة بين الدراسات. إحدى النتائج المترتبة عن هذه الدراسة هي أن اسباب التضارب في الدراسات السابقة هو الإختلاف الأولي بين هذه الدراسات في معايير القياس.

كلمات مفتاحية: التحجر اللغوي، اللغة البيئية، فرضية الفترة الحرجة، الإكتساب الأمثل.

Corresponding author: Mhamedi Nadir, n.mhamedi@lagh-univ.dz

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1. INTRODUCTION

Second language learning is a highly intricate process where learners engage in the internalisation of a new system of rules that adds up to the already internalised system of the first language. This complexity of process is reflected in the availability of multiple theoretical models that seeks to offer a conceptually plausible explanation of what happens in the mind of a multilingual. Generative linguists account for any L2 learning process in light of the principles of universal grammar that align with the contention of modular analytical frames of reference. Cognitive linguists, however, are proponents of the

non-modular configuration of L2 learning as they argue that the mental processes pertinent to the development of second language grammars are domain-general and are not confined to a specific module in the brain.

While the epistemological conflict has not been resolved, there seems to be a general acceptance of the proposition that L2 grammar is a unique developmental system that can be analysed relatively independently of the grammars of the first and target languages. This outlook brings forth an appreciation of the learner language as a formally and functionally viable subject of analysis. Where learners' perception and production are investigated with the goal of accounting for the underpinning processes that enable the learners' mental grammar to develop, restructure or, at times, fossilise.

In light of the above, the present study has the goal of shedding light on the phenomenon of fossilisation where learners' knowledge of L2 arrives at a halt. This phenomenon has been addressed in numerous research endeavours, albeit with conflicting outcomes. The present study adopts a meta-analytical frameworks where a number of seminal studies are reviewed with the goal of addressing research questions related to the conceptual limitations of fossilisation and the cognitive, linguistic and extralinguistic factors that underpin it.

2. Towards the Understanding of Fossilisation

The discussion of cessation of learning requires a preliminary recognition of the theoretical models that explain the nature of second language both as a system and a product. Among the various model that attempt to address such a query,

Lary Selinker's concept of Interlanguage is perhaps the most frequently cited. The following sections provide a global discussion of Interlanguage Hypothesis which serves as a conceptual purveyor of fossilisation research.

2.1 Interlanguage Hypothesis

As learners engage in their second language learning process, a multitude of social and cognitive aspects of experience come into play. This experience draws on the process of first language acquisition. The general contention is that learners are bound to demonstrate frequent reliance on L1 experience to monitor L2 learning. This is evident in the fact that learners constantly attempt at working out how analogous certain aspects of L2 structures are to their L1's. In view of that, scholars believe that developmental patterns in L2 learning are, by and large, systematic, reflecting an incrementally built system of grammar that is indicative of the mental knowledge of L2 (Ellis, 2003). The main research query about this mental knowledge revolves around the way learners build linguistic representations for L2 and the manner in which such linguistic representations change over the course of learning.

In concurrence with the spread of cognitive and innatist views about first language acquisition, principally enunciated by Noam Chomsky, American linguist, Larry Selinker (1972), introduced the concept of interlanguage, also known as learner language (Ortega, 2009), referring to the fact that learners of a second language develop a system of grammar that, however structurally contradistinct, is heavily influenced by L1 grammar and is yet different from both L1 and L2 grammars. The linguistic representations consisting interlanguage are indicative

of learners' developmental patterns which are, arguably, as regular as the patterns observed in the acquisition of the first language. Given its structural niceties from both the mother tongue and the target language, interlanguage, still, entertains the characteristic features of a natural language (Gass & Selinker, 1994). This means that interlanguage is, in essence, constrained by the universal structural patterns that are found in all-natural languages.

During the process of learning a second language, all micro-linguistic levels are under systematic development. This involves constant revisits of the abstractly built rules of grammar, morphology, phonology and semantics. Re-evaluations are the outcome of subconscious hypothesis testing processes that involve trial and error (Saville-Troike, 2006). The view of interlanguage is advantageous in the sense that it views learners' linguistic competence in the second language as a unique system with structural patterns in lieu of the earlier views of this transitional linguistic system as a flawed system. The conceptualisation of learners' language in this way makes use of its output as a diagnostic measure to evaluate the learners' knowledge about the rules of the language as well as a prognostic measure to have a predictive ability about learners' prospective developmental avenues.

In line of that, Crystal (2008) argues that learners' language demonstrates a variety of language-related phenomena, such as the influence of the first language, contrastive interference from the structural patterns of the target language and even overgeneralisations of rules. Such phenomena constitute solid evidence on the porous nature of learners' language. Videlicet,

the empirical observation of learners' grammar indicates that it is open to external influence by dint of adding, deleting, modelling and overgeneralising rules to promote a more complex mental representation of grammar (Ellis, 2003). Another very interesting piece of trivia about interlanguage is that it also warrants surveying learners' learning strategies (Anggraini, 2018). For example, the omission of grammatical rules and the choice not to learn them reflects learners' subconscious evaluation of their readiness to explore certain complex rules (Ellis, 2003, Firth, 1978).

2.2 Selinker's Concept of Fossilisation

Consequentially to the recognition of interlanguage as a unique system of grammar that, however dependent on L1 and L2, enjoy the systematic capacity of natural languages came a compelling question of whether or not non-native speakers' competence in the target language can match their competence in their mother tongue or that of the native speakers. Answers to this question are inconclusive and considerably variable. For example, Michael Long's study of the maturational constraint on language acquisition (1990) and his follow-up research on age as a germane factor in language learning (1993) conclude that learners cannot achieve a native-like competence in the target language. This contention is shared by a number of researchers. For instance, Long (1990, p.206) reviews a number of empirical studies and concludes that "native-like accent is impossible unless first exposure is quite early, probably before 6 in many individuals and by about age12 in the remainder".

More optimistic conclusions show that 0.1% (Scovel, 1988), 5% (Selinker, 1972) and15% (Selinker, 2006) of the

learners are capable of arriving at a native status in learning a second language. Selinker's initial observation was motivated by his personal observation of his grandmother who, despite living in the US for fifty years, cannot be understood by her English speaking grandchildren. More recent research, however, shows that "*late learners are sometimes able to achieve native-like perfection in a second language*" (Bialistok & Hakuta, 1999, p. 176-177).

The bottom line of Selinker's discussion of fossilisation (1972) is that second language learners are bound to arrive at a stage where learning stops notwithstanding the frequent exposure to input, motivation and even well-structured formal instruction. Empirical evidence from longitudinal studies suggests that learners arrive at a stage where they cease to learn falling short of achieving native-like competence (see Han, 2000; 2004; Lardiere, 2007; Long, 2003; Schumann, 1976).

3. Conflicting Findings

The examination of the available empirical evidence shows that there seems to be a consensus that variables such as age, exposure, psychological distance and formal education are contributing factors in the development of the target language. There seems, however, to be a lack of consensus over the extent to which ultimate attainment is possible with this factors being optimal. Ellis (1993) reports that it is not cognitive limitations that prevent learners from ultimately attaining L2. Rather, it other factors such as motivation and exposure. This is evident in his claim that:

[T]he end point of L2 acquisition – if the learners, their

motivation, tutors and conversation partners, environment, and instrumental factors, etc., are all optimal – is to be as proficient in L2 as in L1. Soproficient, so accurate, so fluent, so automatic, so implicit, that there is rarely recourse to explicit, conscious thought about the medium of the message. (p. 315)

One reasonable conclusion is that research at this juncture cannot account for causes for interlanguage fossilisation. Empirical evidence suggests that extralinguistic factors such as attitude can be a determining factor in limiting learners' abilities (Schumann, 1976; 1997). Research also demonstrates that the nature of L1 and L2 structures predetermines learners' prospective development in L2 (Han, 2004; 2006; Lardiere, 2007; Long, 2003). On equal footing, Garham (1981, Cited in Fauzi, 2014, p. 249) attributes fossilisation to mere deficiencies in instruction practices which “*has led many students to devise IL or idiosyncratic languages with rules often wildly different from those of Standard English*”. In addition to that, Sorace (1993), in his research on divergent representations of unaccusativity in near-native grammars of Italian, comes to the conclusion that it is mainly learners' L1 that sets a “more or less favourable starting point for the acquisition of [L2]” (p. 44). It is clear, thereupon, that fossilisation can be the outcome of elements that are not peculiarly determined by learners' initial cognitive setup.

An examination of research on interlanguage reveals two main tendencies. Some scholars elect to investigate learners' linguistic development with the assumption that fossilisation is a universal characteristic in second language learning. This view sketches little, if any, relevance to individual variations in the

rate at which learners reach cessative state. This view stems from the fact that grammatical representations of a bilingual “*cannot reach an isomorphic state with the grammar of a [monolingual]*” (Ortega, 2009, p. 136). Other researchers, however, place more importance on the rate at which learners develop their mental grammars of L2. Here, a more emphasis is placed on the notion of premature cessation of learning (Gass& Mackey, 2007; Ladiere, 1998, 2007; Ortega, 2003).

The first view is challenged by some empirical evidence. For example, Ioup, Boustagoui, Tigi, and Moselle (1994) demonstrate a case of a very successful learner of Egyptian Arabic, Julie, who started her learning experience post the critical period at the age of 21 with no formal instruction accompanying her learning. Naturalistic learning, according to Ioup et al. (1994), resulted in a learning state that was empirically evaluated as a native state. Julie, reportedly, was able to use Arabic isomorphically and was indistinguishable from native speakers. Another very interesting observation is that Julie was reported to have been able not only to pass herself on as a native speaker through having ideal mastery of linguistic performance but also to have native-like intuition about the structure of language. Ioup et al. (1994) identify the results obtained from a Grammaticality Judgement Task where Julie demonstrated results that are unmistakable for native speakers. It is also noted in the report that she preferred canonical word order, i.e., syntactically unmarked structures. At first encounter, Julie’s case seems to provide clear rebuttal evidence against the Critical Period Hypothesis (Lennenberg, 1967), yet even Ioup, in her subsequent works, acknowledges the evidence in favour of

age-determined constraints on second language learning abilities.

Julie's results, inherently reassuring notwithstanding, constitute an individual case upon which no substantiated claims can be made. In fact, literature offers a very comparable counterexample about an instance of premature cessation of learning. Schmidt (1983) investigates the mental grammar developmental patterns of a Japanese learner of English, Wes. Wes's case is very comparable to the case of Julie in the sense that both sought to learn a second language naturalistically without any salient formal tutoring. Another prominent similarity is that the two learners approached their second language in its natural habitat with little, if any, prior knowledge about them. To put things into perspective, the time span of the two studies is three years, which establishes a solid comparability ground. Schmidt (1983) reports Wes's remarkable levels of social skills, confidence and positivity, the three of which set the ideal stage for prospectively meritorious learning outcomes. The prolonged recordings reveal that Wes achieved very high levels in discursive and communicative competence. However, his linguistic competence was, reportedly, far from native-like. Schmidt (1983) acknowledges Wes's excessive use of certain grammatical feature in a fashion that is judged unnatural, though comprehensible, by native speakers. He argues that "*over a 3-year period characterized by extensive and intensive interaction with native speakers, Wes's development in terms of what is generally considered to be the heart of SLA, the acquisition of productive grammatical rules, has been minimal and almost insignificant*" (pp. 150-151).

The literature available at this juncture abounds with instances of longitudinal studies of learners in different settings. Some studies examine learners' developmental patterns over the

course of five years (Han, 2009) up to 20 years (Ladiere 1998; 2007). The scrutiny of these studies reveals conflicting results that report instances of successful near native competence in some cases and premature cessation of learning at rudimentary levels of linguistic competence in other cases. Suffice to say, then, that individual variation in learning a second language are of a particular relevance in research on second language acquisition and, hence, language pedagogy.

Part of this variation and conflicting results is attributable to the fact that researcher are yet to determine the exact nature of multilinguistic competence and how it translates to proficiency in the various skills associated with linguistic behaviour. Whether proficiencies acquired in different languages, such as analytical reading, exist in separate compartment or are in a state of mix and interdependence is the core of several theoretical discussions, the most prominent of which is those of Cummins (1976; 1979; 1981; 2005). The following section highlights the theoretical ground available for the explanation of multilinguistic competence and proficiency.

4. CONCLUSION

The examination of research amounts to the conclusion that the discussion of fossilisation, however inherently plausible, is fraught with many theoretical and methodologically psychometric complications. First, it is experimentally laborious to determine whether learning ceased to evolve unless there is an intricate methodological design that tests learners' progress over a relatively protracted period of time. It can be noted that such a turn of experimental events is rather unattainable given the

customary nature of treatment designs. Ortega (2009) goes even further by making the claim that an accurate judgement about fossilisation requires an exploration of learners' language over the entire course of their lifetime. Second, learning is heavily dependent on the learning environment. This entails that limited learning experiences are bound to be consequential to circumscribed learning environments. Ergo, it is hard to determine whether instances of ceased learning are the aftereffect of universal cognitive limitations pertinent to the acquisition of L2 grammar or, contrarily, learning environments failing to offer ideal learning experiences.

One possible way to draw clear-cut conclusions is to design ideal learning environments that guarantee a both diverse and interesting exposure to L2 input with manifold opportunities that elicit L2 production. Such environments should maintain learners' positive attitude toward learning and L2. It is only then that scholars can have an informed opinion about the true nature of fossilisation being a genetically determined setup or rather an environmentally configured phenomenon. It transpires that such learning environments, however tempting, are beyond the reach of both scholars and language instructors.

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