CHILDREN'S ACQUISITION OF FUNCTIONAL CATEGORIES IN L1

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Abstract: In this paper we provide evidence that attempts to describe and adequately explain how children acquire specific functional categories in L1. We argue that the data supports the hypothesis according to which the underlying syntactic mechanisms function in a creative and innovative way in child grammar without violating constraints. The resulting syntactic asymmetries are assumed to be triggered by the maturation process of functional categories and by the availability of functional categories in child grammar at different stages of language acquisition.

Keywords: language acquisition, grammar, innateness, functional category, syntactic asymmetry.

The analysis presented in this paper comes to support the assumption according to which children undergo specific pre-functional and functional stages during the language acquisition process. An important section being allotted to formatives and how they function during the first years of a language acquisition, with emphasis on case domains. The research is guided by empirical principles and the elicited productions follow qualitative rather than quantitative criteria. From a generative perspective, grammar is defined as a combinatorial system bearing elements that help us understand the design of language. In this sense, the language system is formed of lexicon, items stored and retrieved from memory and a grammar of rules, relations and combinations of sequences. The language faculty is a two part design and its *innateness* is part of the human nature. The demonstration outlined in this paper assumes the insightful nature of language as a faculty of the brain. Moreover, it is presumed that children are able to make syntactic predictions, analyse and use means of language creatively with the help of an innate capacity, the Universal Grammar (UG).

The disseminated data aim to at least partially explain how functional categories occur during the process of language acquisition. Evidence of the way language works in the case of children could explain specific brain mechanisms and their function. Generative acquisitionists are of opinion that children learn in similar ways and that the patterns available stem in universals.

We start from the assumption that children acquire language in an environment in which they experience *poverty of stimulus,* but are able to use finite means in infinite ways, creatively, hence we address Plato's problem (Chomsky 1986, 1988), also known as the logical problem of language acquisition (Baker and McCarthy 1981, Hornstein and Lightfoot 1981). Children activate some sort of inner knowledge that offers the necessary instruments to communicate and solve linguistic problems, even when examples or models are not available in the input. The language faculty has cognitive specificity, is equipped with some inner mechanism, some innate "knowledge", which is biologically (pre)determined (Chomsky 1997), a *knowledge of language* represented in the brain, an innate property partly genetically determined.

In this manner, the child receives *positive evidence* from the linguistic input, but without signals to which interpretations could be licit or illicit. Data show that corrective feedback is sporadic to be sporadic and does not assure that the child will seize to make the same errors again (Brown and Hanlon 1970, Morgan and Travis 1989). One such experiment (1) demonstrates that *negative evidence*, even if reinforced, has little impact on children. In such cases children ignore correction most of the time, supporting the assumption that the primary linguistic data (PLD) is not the most important component in the language acquisition process.

(1)   Mother: No,   say   "nobody   likes   me."

Child: Nobody   don't   like   me.

Mother: No,   say   "nobody   likes   me."

Child: Nobody   don't   like   me.

Mother: Now,   listen   carefully,   say   "nobody   likes   me."

Child: Oh, nobody don't likes me."

(the Bristol experiment 1985)

(2)   Child: Mă dai măsuța.

[to] me   give the table

CliticACC1stSG

Mother: Nu, mă dai măsuța. Îmi dai măsuța.

     NOT [to] me   give the table give me the table.

     CliticACC1stSG   CliticDAT1stSG

Child: Mă dai măsuța.

   [to] me   give the table

   CliticACC1stSG

[…]

Mother: Încearcă să zici îmi.

    try to say me

       CliticDAT1stSG

Child: Îmi.

   me

   CliticDAT1stSG

Mother: Îmi dai măsuța.

give me the table.

    CliticDAT1stSG

Child: Mă dai măsuța.

  [to] me   give the table

  CliticACC1stSG

[…]

Child: Mă dai apă.

[to] me give water

 CliticACC1stSG

Mother: Nu mă dai apă, Tudore, îmi dai apă.

Not [to] me give water Tudor   give me water

CliticACC1stSG   CliticDAT1stSG

Child: La mine mă dai apă.

 [to me]   give water.

CliticACC1stSG CliticACC1stSG (Tudor 2;6)

However, researchers such as Saxton (1997) argue that children react to corrective feedback, and make corrections as a result of the negative evidence provided by the adult.

He proposes a "Contrast Theory of Negative Input", which, in his opinion is more efficient than the positive input. Excerpts of the type presented above demonstrate that children don't learn the patterns from the parent or caregiver, but try to figure out the rules that govern sentences, for they manifest a unique *awareness of principles of mental grammar*, unlike adults, and are therefore capable to acquire language effortlessly at a high speed, for humans can "acquire unconscious patterns unconsciously, with little or no deliberate training" (Jackendoff 1994: 25).

Another possible explanation could be found in the "indirect negative evidence" (Chomsky 1981). In many instances, when negative evidence, or corrective feedback is applied to sentences generated by children, the ungrammaticality is decided on the basis of overt or covert movement, therefore some of the sentences are illicit, when it comes to interpretability, but could be licit in another language. During the early grammar stages, children might produce sentences that do not exist in the adult grammar in question, but could be acceptable in other languages. The conclusion drawn was that there is no clear link between corrective feedback, negative evidence and the way children learn. There might be slight differences in terms of the speed with which the structures are acquired, but children not exposed to negative evidence spoke correctly as well. The role of the linguistic input is undeniable, but not sufficient, therefore children must rely on their *knowledge of language* without which they cannot process the data available in the input.

Our demonstration is aligned to the evidence according to which there is a critical period associated with the biological basis of language. Eric Lennenberg was first to argue that there is a critical period for language acquisition also known as a *sensitive period* which can be delineated roughly from the age of 2;0 until puberty. He is one of the first neurolinguists that associated this period with the specialization of language to the left hemisphere (Lennenberg 1967). According to his research, if humans do not have exposure to language during this period, language might not be able to fully develop. The critical period outlined by Lennenberg does not imply that adults cannot acquire another language, but that the process of L2 acquisition for an adult is different from that of a child, who still has the window of opportunity available. If we agree that language is a modular cognitive system, than such an interpretation holds, for optimal results exposure to stimuli must occur during the appropriate sensitive period in the developmental process of language. According to the interpretation given by Lennenberg, children are able to construct efficiently grammar all the way to puberty when this ability switches off. There

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is increased evidence that the acquisition of language is directly connected to this critical period. Feral children deprived of linguistic input early in their lives are clear examples in this sense, and as a result, when attempting to acquire language later, they no longer had functional syntax (cf. Curtis 1977, the case of Genie, Fromkin 1997, Victor "the Wild Boy of Aveyron" 1799). The linguistic setback was explained in terms of critical period characteristics, functions and the unavailability of syntax. However, with Isabel, the situation changes. She was discovered around the age of six, when she was still within her critical period and consequently was able to fully recover syntax.

I this respect, Chomsky argues that children are biologically programmed for language, the development of language being compared to that of other biological functions. The mind of a child is endowed with an innate ability that fosters the discovery of language rules on the basis of natural language samples. According to this assumption, the innate ability functions as a Universal Grammar (UG) and the universal principles of grammar are innate. The child is capable of language processing based on the empirical linguistic data available to him (Chomsky 1965). Some linguists accept the point of view, according to which the UG framework fosters a great perspective for first and second language acquisition (White 2003), others, accept it only for first language acquisition, considering it insufficient for learners of a second language, especially if learners start after the critical period (Schachter 1990).

The productions analysed in this research paper reflect once more how negative evidence does not influence the process of language acquisition, and how children go through intermediate stages before setting feature value to specific functional categories. The phenomenon could be explained in terms of underspecified grammars (Hyams, 1996: 105). If we are to address the syntax of the functional category we observe that the clitics and clitic-doubling behaviour follows an intricate path in child language acquisition, we could assume that in Romanian the functional maturation process for case takes much longer, for such structures are still observed close to the age of 4;0.

In what follows we take a closer look at the oblique case and case hierarchy from a universal perspective, with focus on Dative feature checking. Hierarchically speaking, the verbs offer the framework of the structure and establish the structural asymmetry. In the case of the verb 'a da' [to give], the child must acquire the meaning of that particular verb, the underlying concept (eg. transitive, intransitive), what type of phrase structure it appears in and the theta roles assigned. The phrase structures could be interpreted as

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unacceptable, or with a low degree of acceptability, which doesn't mean that the adult does not understand what the child says, but it is not the way he/she would generate such structures.

Why does it take much longer for some functional categories to be acquired as opposed to others? The role played by the hierarchical linguistic structures could provide some answers and could partially be explained as a positive exception. In what follows we will attempt to explain how case is assigned at specific stages of language acquisition.

(3)   Mă   dai măsuța. (Tudor 2;6)

 [to] me   give the table

 CliticACC1stSG

(4)   Mă   dai apă. (Tudor 2;6)

[to] me give water

 CliticACC1stSG

(5)   La mine   mă dai apă. (Tudor 2;6)

[to me]   give water.

CliticACC1stSG CliticACC1stSG

(6)   Te rog să mă dai. (Mihai 2;6)

Please [to] me give

CliticACC1stSG

The phenomenon we encounter might be labelled at a first look as a Case assignment problem.The verb 'a da' [give] only assigns [+DAT] and *la mine* [to me]is governed by *dai* [give]. By LF all cases must be appropriately checked, at Spell-Out we must have convergence at the LF and PF mapping. In Romanian object arguments must be doubled by pronominal clitics. The rule is selected from the environment. The children in question understand the need to mark the object with a clitic, they hear DAT, but produce ACC, the ACC clitic is the only available and it is consequently used in place. The ACC is checking for the IO. Following the clitic-doubling rule, the PP is in argument position, 'dai' does not have [+ DAT] therefore it's uninterpretable.
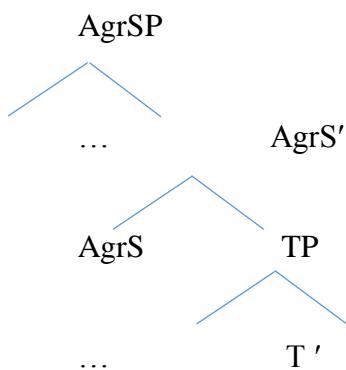
The minimalist approach to Case theory and Case checking is empirically advantageous. We assume that lexical items, functional heads included, enter derivation with their features already specified. The system then decides whether the structures are licit or illicit. As we notice, the lexical items that enter the derivation bear accusative case features instead of dative features. Under minimalist assumptions, accusative and oblique

cases enter derivation the way the nominative case would. According to Case theory, we would have a representation such as the one in (7) and assume thatthe null subject of the pro-drop language would move to [Spec, IP] to be checked against the finite Iº, which presumably can check nominative case. The subject is contextually determined. For instance, if a lexical item of the type *tine* [to you ACC] would be retrieved for derivation and moved to the [Speck, IP] for feature checking, case feature would not be checked in the Iº, and the result would be rendered unacceptable. Such forms have not been observed or attested in the empirical data of first language acquisition, they would violate UG constraints. The lack of evidence of such form in speech comes to support the assumption that children do use the apparatus creatively, but don't violate constraints.

(7)   [IP heNOM [I' Iº [vP t admires himACC]]]] (Hornstein et al. 2005)
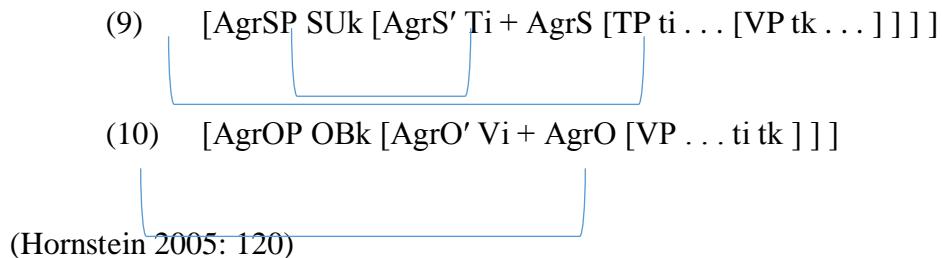
Hence, we address the matter in terms of feature checking. Such an approach is advantageous for it doesn't require representations at interface levels, it relies more on economy. For empirical reasons, in the case of complex paradigms, Case theory is explained in such terms. We have at hand two relations for free, by default: the complement and the specifier of the head. These two relations are described as self-sufficient. The question is whether these two relations can be extended to case licensing as well. The Minimalist Program (MP) proposes a unified Spec-head approach to Case theory, respectively a new means of case configuration. Thus, we cannot generalize the head-complement relation for case assignment and we must shift focus to the other available relation, Spec-head, and try to explain how Case could be checked under this relation. The question would be how to check structural cases under a Spec-head configuration. Given the ground-braking evidence in analysing data from various languages, Chomsky (1995) proposed a more considerate and improved clause structure which included agreement with the subject and the object (8).

(8)

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        AgrSP
        /    \
      ...    AgrS′
             /    \
          AgrS    TP
                 /   \
               ...   T ′
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T	AgrOP
…	AgrO′
AgrO	VP
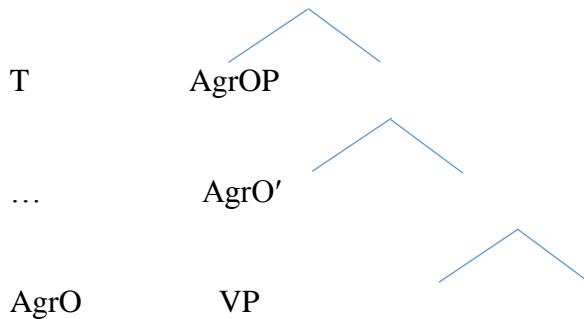
Under this assumption, the subject moves from VP internal to [Spec, AGRSP]. The question remains whether the accusative and the oblique check the same way the nominative case does, if the object checks its accusative case in Spec-position and not in its base, complement position. If lexical items are selected and enter derivation fully inflected, then the feature checking in the LF could be overt or covert, dependent on the language for which case is described, see (9) and (10).

(9) [AgrSP SUk [AgrS′ Ti + AgrS [TP ti . . . [VP tk . . .]]]]

(10) [AgrOP OBk [AgrO′ Vi + AgrO [VP . . . ti tk]]]

(Hornstein 2005: 120)

Additionally, movement is triggered and consequently can happen before or after Spell-Out, depending on how strong or weak the features are. In English, for example, movement of the subject is triggered before Spell-Out (the EPP feature is very strong), while AgrO is checked after Spell-Out, the feature is weaker and Procrastinate intervenes in this case. Where does this leave us with case checking in the early stages of language acquisition? Within minimalism case domains are unified, all cases being configured on Spec-head relations. With the example given above (9), it is obvious that movement is triggered, the lexical item selected enters derivation fully inflected, and syntactically the operations work. In analysing our data we note that the child bears the 'knowledge' and even tries to explain it to the adult by reinforcing the clitic-doubling rule. So we have Ɵ-role assignment in place, we have operations Merge! and Move! in place, the feature checking takes place in the LF. The question that needs answering is why do the pronouns măACC [me] and la mineACC [to me] surface, instead of mieDAT and îmiDAT. Technically, we might assume that the Case-specification was the accusative, when the

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lexical item entered derivation. The case that entered derivation was checked against a head, in a Spec-head relation, rather than a head-complement relation, the checking being performed in the LF form. The conclusion may be that the pronoun has not matched the features of V+AgrO and as a result the derivation crashes. Only it isn't so. The resulting structure doesn't crash. The syntax is sound, but the lexical item retrieved and available carries the features of the accusative case. The child doesn't hear the dative form in the PF, employs the first structurally available form, that of the accusative, and checks in the LF the oblique features, [+DAT] uninterpretable features. It appears as if we don't have the 'right' case-morphology, but the computation is sound.

In explaining how case features can be checked on Spec-position, we will use two sound hypothesis that proved successful: Split-Infl Hypothesis and VP-Shell Hypothesis. The VP-shell allows for features of structural accusative and oblique cases to check in Spec-head configurations. The light v head licences the nonstructural cases, the inherent case (Chomsky 2000). Depending on how rich the morphology of a language the movement might be overt or covert, therefore if we have full agreement, it is established covertly, while with partial agreement, overtly. For oblique cases the Spec-head configuration could look like this in English (11).

(11)   [AgrP DPk [Agr′ Pi + Agr [PP ti tk]]] (Hornstein 2005: 124)

According to the minimalist approach oblique and accusative cases check their structural cases in positions higher than where they were Ɵ-marked, the complement being checked in a Spec-head configuration cost-free, which means that any structural case should fall under this assumption, for lexical items enter derivation with their case already specified.

Our research paper must briefly shift focus on case hierarchy as well, for case paradigms are believed to be *asymmetrical*. Pavel Caha is one of the researchers who proposed universal hierarchies in his attempt to demonstrate that precedence on case hierarchy should be understood as syntactic containment: "...the features characteristic of nominative are proper subset of the features corresponding to the accusative which in turn are a subset of the features characterizing the obliques. Further the relevant features are arranged in a cross-linguistically unique functional sequence" (Caha 2008: 248). Each case arises and is embedded under a feature that is added and checks. Therefore the NP is embedded under a feature P, and so on. Each of the cases arise if a new feature is added. In this sense, hierarchy is not viewed just in terms of paradigms, but more like a syntactic

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instrument. Lexicalization is the natural result, for the lexical entries map via syntactic operations in the PF. Containment in case hierarchy can function as an instrument for the depiction of morphological patterns as well. Such universal hierarchies could explain why in the acquisition of some uninterpretable features the feature checking stops. Some predictions were made with regard to genitive and oblique cases as opposed to structural cases, in the sense that the former contain an extra θ projection which blocks extraction (cf. Starke 2001).

In conclusion, the corpus analysis provided in this paper supports the assumption that language acquisition is an innate process. The evidence in the linguistic environment is in favour of the assumption that the acquisition of language is directly connected to the critical period. Language acquisition is made possible by the innate property of the language and is linked to CPH and the UG principles. Negative evidence has little to no impact on the way children acquire language and even if corrective feedback is applied, it doesn't necessarily mean that the child will seize to make the same errors. We must also acknowledge that what seems alien to the actual linguistic input, might be perfectly acceptable in other languages. In the acquisition of first language, features are eventually checked, although the cycle might take longer with some uninterpretable features, examples were provided in this direction. The linguistic readiness of children is propelled by the input-output relation, the primary linguistic data (PLD) available and the way the language is mapped.

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