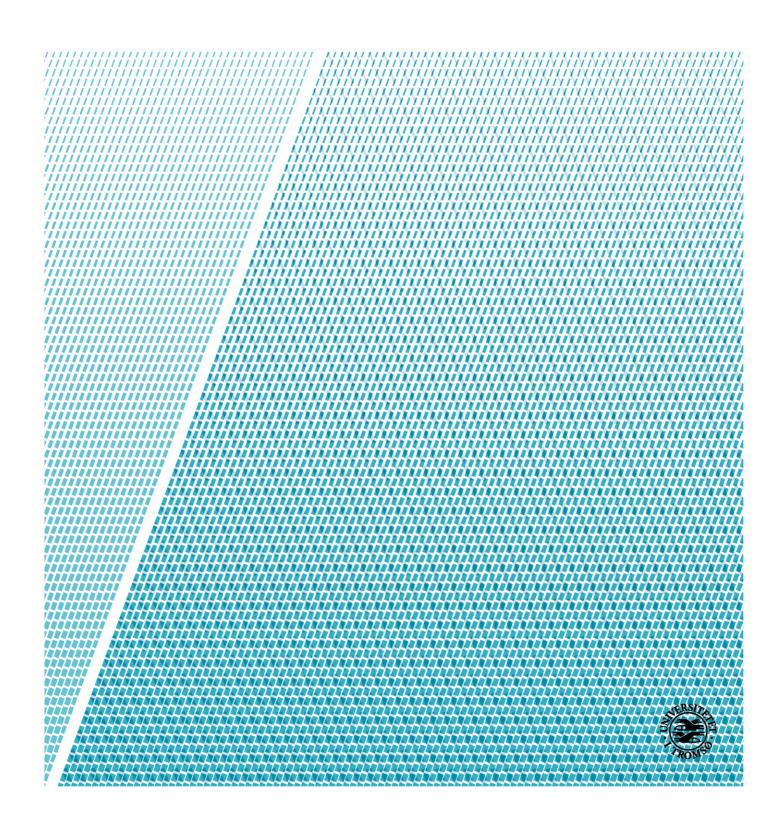**UiT**

NOREGS ARKTISKE UNIVERSITET

Child second language acquisition without communication

Pål Hunstad Kalstad
Masteroppgåve i ENG-3982 Mastergradsoppgave i engelsk språk ved lektorutdanningen trinn 8-13, 40 studiepoeng

Fakultet for humaniora, samfunnsfag og lærerutdanning

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Abstract

This thesis is a case study of a four-year-old Norwegian girl who has acquired English as a second language through watching children's programs on YouTube. The goal of the thesis is to investigate the acquisition process and to investigate if the child has acquired English syntax. The acquisition process through television is interesting as English has been acquired without human interaction. Language acquisition is argued to be dependent on human interaction for acquisition to happen (Kuhl, 2003). If the child, Lucy, has acquired English syntax it is I am curious to see which structures she has acquired and if her acquisition correlates with older Norwegian learners. Or if Lucy has acquired structures that Norwegian learners usually struggles with, such as do-support and topicalizations, due to authentic input and cues in her input. The thesis will look at Lucy´s acquisition process and investigate whether she has acquired English syntax, and investigate the acquisition of dummy *do* as Norwegian learners often struggle with these structures.

The results show that Lucy has partially acquired English Syntax. Due to positive transfer from Norwegian Lucy had no problems with subject-auxiliary-inversion. Lucy seem to struggle with English syntax where the structures differ in Norwegian and English. There was negative transfer in most cases regarding interrogatives with do-support. In negative declaratives however, Lucy is mostly target like in her productions. Her production follows the pattern of monolingual English children, which could indicate that Lucy has not acquired certain structures in English due to a lack of input.

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1.0 Introduction

This project was introduced to me when my supervisor told me about a four-year-old girl who, according to her parents, had acquired English language by watching children´s television shows on YouTube. I found this project interesting because the project can help investigate the use of television in future English classes to help English acquisition. Current theories on second language acquisition (SLA) continuously points out the importance of human interaction, and the input, feedback and corrections lead to in SLA (Hummel, 2014, Gass et al, 2014). According to the sociocultural account of language acquisition, involvement by the learner in the community and socially interacting with speakers of the target language is crucial for acquisition to happen (Hummel, 2014).

This topic is interesting with regards to how television programs can be used in English classes. As our society is moving towards a digital world where the internet provides us with an endless amount of possibilities for input, I am curious to know how languages can be acquired, and what is possible to acquire in terms of language proficiency through television programs.

When I was searching for information on this topic, most of the research indicated that television has a good effect on the acquisition of vocabulary and mild effects on the acquisition of syntax (D'yewalle and apvakanun, 1997). Transfer is also likely to happen between languages that are typologically similar (Ringbom, 1987, Hulk & Muller, 2000). It is possible that transfer is the reason for this girl´s ability to speak English. Transfer from Norwegian syntax into an English vocabulary, or the cues received in the input from television is might be enough for Norwegian learners of English to acquire English syntax. Westergaard (2003) looked at Norwegian children in elementary school and argued that Norwegian children do not acquire non v2 word order because of a lack of cues in their input.

For a Norwegian child acquiring English as a second language there are several syntactic phenomena that can cause confusion. While English is a subject-verb-object language Norwegian is a verb second language (V2). In Norwegian All finite verbs follow the subject

regardless if they are main verbs or auxiliaries. However, in English, only finite auxiliaries move to second place in a sentence. The difference can be seen in (1) and (2):

1. a. Today I **played** football
   b. I did not **play** football
   c. Did I **play** football?

2. a. I dag **spilte** jeg fotball
   b. Jeg **spilte** ikke fotball
   c. Spilte **jeg** ikke fotball?

The aim of this thesis is to see if Lucy has acquired English syntax. I will investigate whether Lucy has acquired English by looking at different syntactic parameters. The syntactic parameters of interest is verb movement, and the use of do-support in English.

It is expected that Lucy is able to form structures that are similar in Norwegian and English, such as subject initial declaratives, interrogatives with a finite auxiliary verb due to transfer from Norwegian to English. It is not expected that Lucy has acquired the structures that are not similar in Norwegian and English such as do-support.

2. Theoretical Background

In this chapter I will first present SLA and look at a few factors influencing the acquisition process. Then there will be a few notes on Norwegian and English syntax. Then I will present current theories on SLA before, finally, I will present research on the acquisition of English in monolingual English children to have a comparison to Lucy´s acquisition process.

2.1 Second language acquisition

In this chapter I will take a look at second language acquisition (SLA, henceforth). I will focus on child second language acquisition and which factors that may play a role in the process of SLA. I will also introduce structures that may be transferred from Norwegian to English. I will first provide a general approach of child second language acquisition and look at factors that can come into play, such as transfer, type of input/output, and motivation.

2.1.1 Child second language acquisition

SLA is the process of learning a language after the acquisition of a first language. SLA is found in all walks of life and can be achieved to a certain degree by all people (Hummel, 2014). SLA is different from first language acquisition (FLA). When people start acquiring a second language, a first language has already been acquired. This leads to several factors that influences the acquisition process. These influencers are L1 transfer, amount and type of input, and motivational factors for acquisition (Döpke, 2000).

Child SLA is viewed as a bridge between FLA and adult SLA. Similar to FLA, child SLA occurs before puberty. Therefore, they are still inside the "critical period" described by Lennenberg (1967). *The critical period* tries to explain why children seem to acquire languages with such ease, while adults seem to struggle. Lennenberg (1967) argues that this period starts during toddlerhood and ends at the onset of puberty. There are many views on this topic, and there are many who argue that instead of a "critical period" that abruptly stops at puberty it is rather a "sensitive" period. Children are more sensitive to language input before puberty, and due to changes in the brain this sensitivity slowly disappears as one gets older (Hummel, 2014). On the other hand, like adult SLA they also have acquired, or partially

acquired, a native language. Since this is the case, language transfer must be considered in the acquisition process (Rocca, 2007).

When acquiring a language there are several aspects that are involved in the process. I.e the exposure to the target language, the kind of input and output that is generated, transfer between the languages, and the similarity between the two languages (Hummel, 2014, Gass et al, 2014, Rocca, 2007). In addition, individual factors can come into play such as motivation, intelligence, aptitude and many others (Paradis, 2011, Gass et al, 2014). In the next section I will look at how the different factors can affect SLA.

2.1.2 Transfer

When acquiring a second language the learner has by definition already acquired an L1. This might lead to the phenomenon of Transfer, which may be defined in the following way:

...the influence resulting from the similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly) acquired (Odlin, 2003, p.27).

When acquiring an L2, the L1 and L2 might start to interact and influence each other. Languages that are typologically similar tend to lead to more transfer (Ringbom, 1987, Hulk & Muller, 2000). Rocca (2007) argue that Like L1 learners, and unlike adult L2 learners, children acquiring an L2 are still sensitive to learning a vocabulary, and like adult L2 learners, child SLA is influenced by language transfer. Language transfer can occur through negative transfer, when a learner transfer structures or items that are different from the target language. Or, positive transfer, when the learner can transfer structures or items that are similar in the two languages which gives a target like structure (Selinker et al, 1975, Hummel, 2014). Döpke (2000) also states that a child is more likely to use L1 structures when confronted with difficult L2 structures. Selinker et al (1975) found that strategies of language transfer, simplification and overgeneralization of L2 rules affected the L2 production of seven to eight-year-old children in a French immersion program.

2.1.3 Input/output

In the acquisition of a language most researchers agree that input and output is crucial (Hummel 2014, Gass et al, 2014). There are many different ways a learner can be exposed to the target language (TL). In L1 the exposure often occurs at home where the child is exposed to natural settings and conversations. In L2 however, the exposure often happens in instructional settings, such as in school. Because of the controlled exposure of the L2 this can lead to a lack of exposure. In school some aspects can be prioritized due to the limited amount of time that is available. This can lead to the learner failing to truly acquire the TL. This can be attributed to the learner not being exposed to certain constructs in the TL (Hummel, 2014). Tomlinson & Masuhara (2009) also argues that authentic input and feedback is crucial when acquiring a language. Authentic input is meaningful, varied input that happens in everyday life (Garcia-Carbonell et al., 2001). In the L1 this happens automatically while in L2 it can be difficult to create authentic input as the learner often receives the input in instructional settings.

2.1.4 Motivation

Research on motivation has not only looked at the role of motivation, but also showed that there is a high correlation between second language acquisition and motivation (Hummel, 2014). Acquiring a language is a time-consuming process that can take years to achieve. This means that the motivation must be maintained for this entire period. Due to the longevity of SLA motivation cannot be viewed as static, but dynamic in nature (Dörnyei & Skehan, 2008, Gass et al, 2014).

In essence there are two different types of motivation; Intrinsic and extrinsic motivation. Making it meaningful and personal promotes intrinsic motivation for learning. Engaging students in optimal challenges and promoting feelings of success and competence will increase the intrinsic motivation in the learner (Williams and Burden, 1997). It is also important that good interpersonal relations are in place between the student and teacher

(Noels et al., 1999, Dornyei, 2007). Extrinsic motivation on the other hand are sources outside of yourself such as a rewards, prizes, or simply attention from others (Dornyei, 2007).

Gardner and Lambert (1972) and Gardner (1979) argue that the variable motivation refers to the driving force in any situation. Motivation to learn the SL is viewed as comprising of three elements. First the individual expends effort to learn the language, e.g. by doing homework, etc. Second, the motivated individual wants to achieve the goal. Third, the motivated individual will enjoy the task of learning the language. Such an individual will say that it is fun, a challenge and joy, even though at times enthusiasm may be less than at other times (Dornyei 1994). Integrativeness is another variable that is important to SLA. Integrativeness reflects a genuine interest in learning the second language in order to come closer to the other language community. At one level, this implies an openness and respect for other cultural groups and way of life (Dornyei, 1994).

2.1.5 Norwegian and English syntax

In this section I will be comparing Norwegian and English syntax and looking at the challenges a Norwegian learner of English can face. Looking at Norwegian and English the constructions of sentences seems to be similar as in (1a) and (1b). The verb is in bold.

1a. Nor: Jeg **så** en film
1b. Eng: I **saw** a movie

This should make a Norwegian L1 speaker acquiring English, and vice versa, a relatively easy task. Learn the vocabulary and voila! However, it is not quite that simple. Looking closer at the two languages some differences appear. English is a strict subject-verb-object (SVO) language, which means that in general the verb follows the subject. Hence, if we have a non-subject initial sentence such as (2a) the verb still follows the subject. However, in Norwegian a change happens. Norwegian is a V2 language and the verb will generally be in 2nd place as in (2b).

(2a) Yesterday, I **went** to the store
(2b) I **går** gikk jeg på butikken

*Yesterday, **went** I to the store

The reason why English might seem like a V2 language is referred to as residual V2 (Rizzi, 1996). Norwegian and English are similar with regards to movement with auxiliaries and BE. Such as in clauses with negation or adverbials (3a) and (3b), and in interrogative clauses where English displays SAI (4a) and (4b). English also have a residual V2 in clauses that are introduced by short adverbials such as here and there in (5a) and (5b). In negative declaratives (6a) and (6b), yes-no questions (7a) and (7b), and in WH questions (8a) (8b). In these structures the two languages seem similar.

(3a) I **have** not seen her
(3b) Jeg **har** ikke sett henne

(4a) Have you **seen** her?
(4b) Har du **sett** henne?

(5a) Here **comes** the bride
(5b) Her **kommer** bruden

(6a) I have not **seen** the car;
(6b) Jeg har ikke **sett** bilen

(7a) Have you **seen** it?
(7b) Har du **sett** den?

(8a) What have you **bought**?
(8b) Hva har du **kjøpt**?

With regards to verb movement in Norwegian V2 and English SVO parallels break down. Norwegian moves the verb in all main clauses which results in V2 order in topicalized structures (9a), questions (10a), and sentences with adverbials (11a) (Westergaard, 2003). Norwegian allows for auxiliary and main verbs to move, while English only allows auxiliary movements where the auxiliary moves across the adverbial in a declarative main clause, and

in questions (9b) (Anderssen & Bentzen, 2018). With the lack of a finite auxiliary in English they deploy do support (10b).

(9a) Hvilket hus **bor** Jonas i?
*Which house **lives** Jonas in?
 (9b) In which house is Jonas **living** in?

(10a) **Spiste** du den?
***Ate** you it?
(10b) Did you **eat** it?

(11) I går **spilte** Jonas ishockey hele dagen
*Yesterday **played** Jonas ice hockey the entire day
 ´Yesterday Jonas **played** ice hockey the entire day´

When learning English, Norwegian learners must learn two new parameters in acquisition of word order. These are topicalized structures and sentences with do-support for lexical verb movement. The word order in questions as well as sentences with adverbials, where learners must understand that auxiliaries and lexical verbs are treated differently in English with respect to movement (Westergaard, 2003). For the learner to understand that these constructions are ungrammatical exposure to sentences with do-support are needed. If children are not being given enough input, then they will not understand this difference. If they are only being given questions with moved auxiliaries it can be said to be misleading as children would assume that there is verb movement in English (Westergaard, 2003).

1. SVO   (frequent)
2. WH-questions with AUX/be (frequent)
   (Westergaard, 2003)

2.2 Language theories

In this section I will start by giving a general account of different language theories. Due to the nature of this thesis I will focus on a sociocultural account of SLA and give an account of a cue-based view of acquisition.

2.2.1 General overview

Generative grammar is a rule-based form of acquisition. It fronts Universal Grammar (UG) which provides the child with the ability to learn functional structures and constraints. In other words, the child only has to learn lexical items and some language specific parameters to acquire a language. The reason for this theory is the «poverty of stimulus» where they try to explain why children with relative ease and speed can acquire a language and create new sentences with very little input. Children receive only a few examples before they can set a parameter and make a generalization for the language (Westergaard, 2009, Gass et al, 2014, Hummel, 2014).

Constructivist work argues that English speaking children simply reproduce frequent wh-word+auxiliary combinations in the input (Westergaard 2009, Gass et al, 2002, Hummel, 2014).
Constructivist approach to language learning argues that a child's early production does not reflect an acquisition of rules, but a product of an analysis of the input the child has been exposed to. Children initially learn item-based chunks and then various constructions where different lexical items may be inserted (Tomasello, 2006). With a constructivist approach target like features that appear with correct subject auxiliary inversions are frequent in the input, while non-target forms appear when the construction is infrequent in the input (Rowland & Pine 2000).

2.2.2 Sociocultural theory

The sociocultural theory (SCT) states that social interaction plays a fundamental role in in the learning process. Vygotsky (1978) pointed to the role of "mediation" and proposed that language is one of the basic tools of which we mediate and connect with others.

The SCT view argues that the language learner cannot be studied apart from the social and cultural context in which he or she is embedded. SLA is a social process where the learner cannot be separated from the social environment where he/she operates (Dornyei, 2009). In general, language acquisition happens through replicating language observed in the environment, or through "private speech" (Hummel, 2014).

Vytgotsky, which had a sentral role in the SCT, developed the "Zone of proximal development" (ZPD):

The distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers. (Vygotsky, 1978, p.86).

The ZPD looks at SLA and the acquisition of the L2 by collaborating with other speakers of L2 which are at your own level or a slightly higher one. Looking at it through this perspective, interaction is not only advised for learning, but necessary for learning to occur. It is then also essential with a social community where interactions and experience can be accumulated for learning (Hummel 2014). Input that is slightly beyond the learner´s current level of grammatical knowledge will lead to acquisition. Given the right kind of input acquisition will be automatic. Interaction is crucial to development as it gives the learner a way of cracking the code (Clark & Clark, 1977., Long, 1983., Gass et al, 2002, Kuhl, 2003).

2.2.3 Cue based account of language acquisition

Lightfoot (1999) suggests that language acquisition happens when the child uses structures in the input as a source of cues for parameter setting. Originally it was suggested for first language acquisition. It claims that if acquisition is to happen for a certain construction there must be cues that are strong enough in the input. If the cues are not strong enough, a certain

grammatical construction might not be passed down from one generation to the next. This will happen if the cues for a construction is less frequent in the next generations input.

The output of the grammar is entirely a by-product of the cues that the child finds (Lightfoot,1999, p.149).

Westergaard (2003) argues that Norwegian word order is easily acquired with a cue-based view of learning. Topicalizations are frequent in the input, hence, the rules become quite clear. However, in English the input is ambiguous when it comes to word order (SVO or V2). The infrequent cues that occur in English make certain structures harder to understand.

Westergaard (2003) also argues that Lightfoot´s (1999) cue-based account of L1 acquisition can be used in L2 acquisition as well. If the learners assume that all aspects of the TL are similar to their L1 then cues from the L2 is necessary in the input to show the learner that the two languages are different. As Westergaard (2003) states the cues are infrequent in English and because of the frequent cues in Norwegian, transfer from Norwegian to English should not be unlikely. Since the cues are infrequent in English it is necessary with more cues in the input for the child to discover that languages are different. Roeper (1999) argue that English input is ambiguous with respect to word order also for English monolingual children.

Westergaard (2003) argue that a cue-based account of acquisition can explain the transfer and late acquisition that happens from Norwegian to English in verb movement across adverbials. The cues for acquiring V2 is argued to be insufficient for unlearning V2 as learners require stronger cues for word order in sentences with adverbials (Bentzen, 2000).

Westergaard (2003) also argue that in everyday conversations there is an abundance of questions with do-support. However, in Norwegian textbooks there is no input of do support. With a cue-based account for acquisition the learner needs more input of do-support and topicalization to understand the differences between English and Norwegian with regards to verb movement (Lightfoot, 1999). In Westergaard (2003) the data indicates that Norwegian learners of English that receives their instruction in school do not master do-support or topicalizations until 6th or 7th grade, which also coincides with textbooks that provide examples of do-support and topicalization. This leaves Norwegian learners in a difficult position. The cues that are necessary for acquisition of word order are either infrequent in the

language or left out from the teaching material. Since the common SVO structures in the input are ambiguous in regard to V2 it will take the learners time to realize that English is not a V2 due to transfer from Norwegian (westergaard 2003).

3.0 previous research

This section will look at previous research conducted on SLA through media, a cue-based account, and for comparison it will look at acquisition of English by monolingual English children for comparison with Lucy.

3.1 Previous research on the effect of television on SLA

Research done by Lemish & Rice (1986) indicate that age-appropriate television programs in the target language (TL) can influence language acquisition, both intentional and incidental language acquisition. Kuhl, Tsao, and Liu (2003) argue that toddlers learn better from live teacher demonstrations than video. However, they also see learning starting to happen with screen media after the age of two, indicating that children aged two years and older can learn vocabulary from television programs. Fisch (2000) argue that learning through television depends on a child's ability to process the content. Hence, the distance between the educational content and the narrative is crucial. If the educational content is integrated with the story making the distance between them as small as possible learning is possible. This means that a program must be adjusted to a child's age, interests and ability to process information (Anderson and Pempek, 2005, Kirkorian et al., 2008). However, before the age of two it is indicated that children do not comprehend the nature of television (D'yewalle and apvakanun 1997, andersson et al., 2001).

Children´s television shows which captures their attention, such as Sesame street, Peppa pig, Blue´s clues, and Dora the explorer, has a positive effect on children older than two years old. This has to do with the development and ability to perceive what is happening with the input. A study by D'yewalle and Apvakanun (1997) on children finishing secondary school found mild effects of watching television on grammar, and a strong effect on vocabulary. Age-appropriate television shows indicate a great potential in incidental learning in vocabulary (For more on SLA and television see D'yewalle and van de poel 1999. Koostra and Beentjes,1999. Kooslstra, Peeters, and Spinhoof 2002. Linebarger and Walker, 2005).

3.2 Previous research on acquisition of Auxiliaries and Do-support in English monolingual children

In English monolingual children auxiliaries enter when the children reach the two-three-word stage (Villies & DeVilliers, 1985). Copula BE is the first functional verbal element to appear.

This happens at 2;2 and is less frequently omitted compared to auxiliaries. Also, dummy-do and auxiliary BE are more often missing than modal auxiliaries (Westergaard & Bentzen, 2010). Auxiliaries are first attested at 2;7 to 2;8 (Stromswold 1990). Do-support and auxiliary BE is omitted frequently up to the age of 2;9. And when auxiliaries are acquired, they usually employ SAI (santelmann et al, 2002, Rispoli et al, 2012, Westergaard & Bentzen, 2010). Do-support is first used in negative declaratives, and then is expanded to questions. In four of the five children investigated in these studies the use of *do* in negation preceded the use of *do* in questions by 2-7 months (Ervin-Tripp, 1973 and Miller, 1973, Rowland and Theakston, 2009).

When the children develop their language, they move to sentence medial negation, where the auxiliary typically is omitted "Man, no go in there" (Radford 1994, Drozd, 1995).
At this time the children also start using negative forms "can´t" and "don't" (Bellugi, 1967).
A study by Thornton & Rombough (2015) with 25 children aged 2;5 to 3;4 indicated that negations were elicitated when target like construction included auxiliary "doesn't". In the responses 52.5% included "doesn't". However, there might be a lot of variation when productive do-support in negative declaratives are acquired as the children varied from using "doesn't "79% of the time to some children who did not produce a single target like instance of "doesn't" across the age groups.

4.0Methodology

This chapter will look at Lucy´s background, explain who Lucy is, and look closer at her acquisition process. The second part will look at how the data in this thesis was gathered.

4.1 The Child

The child in this paper is a four-year-old Norwegian girl, named Lucy in this thesis. At the time of the data collection Lucy is 4;8 years old. Lucy lives in Northern-Norway with her parents and her older brother who is 18. She also has another older brother who is 20 years old. Lucy is described by her parents as a social girl, who is not afraid to interact with other people, or children. When the family was on holiday, Lucy was frequently seen speaking and playing with other children, while speaking in English. Both her parents are employed and have a college education. According to her parents they themselves are not very proficient in English. However, after my visit it is apparent that they have a working knowledge of English, which allows them to interact and have everyday conversations in English.

When Lucy started to speak English, her parents said that it came as quite a shock. According to her parents, neither they, or anyone else, ever spoke to Lucy in English before she started to speak to them in English. After being incidentally exposed to children´s tv shows in English, Lucy only wanted to watch her shows in English. Lucy´s parents then let her watch television shows such as Peppa Pig on YouTube. One day they noticed that, while Lucy was playing with her toys alone, she was speaking in English. At this point her parents started interacting with Lucy in English, but only when Lucy engaged them in English. When Lucy starts speaking Norwegian so do her parents. I was told the teachers at the daycare center behave in the same way.

4.2 Data collection

The data from Lucy was collected over three sessions over a period of three months from when she was 4;5 to 4;8. The sessions were conducted in Lucy´s home while the parents were present in the house. The data is based on spontaneous speech while playing and interacting with me, and only Lucy's utterances were transcribed. Our language together was English. During our recordings Lucy did not know that I knew Norwegian. This was planned as the goal was to record Lucy's English proficiency. A challenge was that in her home Lucy was in

a Norwegian arena and could be prone to speaking Norwegian if her parents were present. We eliminated this possibility by keeping the parents in different rooms while I was recording.

There were, however, a few factors that could affect the data that was collected. The data was only gathered over a 2-month period. This means that it was difficult to see if there was any progression in Lucy´s proficiency. Another factor is the fact that due to the short timeframe of the project, I did not have the time to become well acquainted with Lucy. This means that her output could be affected by her insecurity towards an unknown grown man.

5.0 Research questions

Transfer is expected to happen where the two languages are typological similar. It is expected to happen when the finite verb is an auxiliary as in (13) and (14). In interrogative clauses English displays subject auxiliary inversion (SAI) (15) and (16). In topicalized structures introduced by a short adverbial (17) and (18). Also, in negative declaratives (19) and (20), and in wh-questions (21) and (22) the two languages display finite auxiliaries in a parallel position (Hulk & Muller, 2000).

13. I **have** not seen her
14. Jeg **har** ikke sett henne
15. Have you **seen** her?
16. Har du **sett** henne?
17. Here **comes** the father
18. her **kommer** pappaen
19. I have not **washed** the car
20. Jeg har ikke **vasket** bilen
21. What **have** you bought?
22. Hva **har** du kjøpt?

Transfer is not expected to happen when the Finite verbal element is a lexical verb. In Norwegian lexical verbs also move in negative and interrogative clauses, while English employs do-support (23) and (24).

(23) I did not **buy** the book
(24) Jeg **kjøpte** ikke boken?
*I **Bought** not the book?

In section 2.1 we saw that there are some challenges that faces a child learning an L2. Not only is it challenging to receive a proper amount of input, but it is also a challenge receiving the right type of input. In addition, the child also has to distinguish between the two different structures. As Norwegian and English are typologically similar transfer of items and structures from the L1 to the L2 are expected (Ringbom, 1987). As mentioned, it is also argued that transfer happens with structures that the learner struggle to acquire (Hulk &

Muller, 2000). It is therefore likely that there will be transfer from Norwegian to English in structures that contain do-support, and where the finite verb is lexical.

The problem of authentic input influences the acquisition process (Tomlinson & Masuhara 2009). To acquire a language authentic input it is necessary to facilitate the necessary cues to acquire certain constructions in a language. In addition, it is also important to receive enough input. In English these structures are do-support and the unlearning of V2 movement (Westergaard, 2003). A common issue with Norwegian learners of English, is that they struggle with these constructions due to a lack of cues in their input. Television on the other hand is a source of input that is abundant of these cues. It is therefore possible that a Norwegian child learner of English that is exposed to English television can acquire English structures that we usually struggle with, such as do-support and non-movement (V2) structures.

There is also a lack of interaction to consider. As mentioned in Hummel (2014) the sociocultural account argues that interaction is crucial for acquisition. This is partially supported by the findings that watching television in a target language promotes acquisition of vocabulary, but not syntax (D.L Linebarger and D. Walker, 2005). With this in mind it is possible that acquisition of English vocabulary is possible for a Norwegian child learner of English through television. Previous research does not support acquisition of syntax through television. However, it is possible that as Norwegian and English are typologically similar, a partial acquisition of syntax is possible due to positive transfer. Based on the previous research mentioned the questions are:

1. Has Lucy acquired English syntax?

    1a. Lucy is predicted to have no problem with SAI with aux (due to positive transfer from Norwegian.

    1b. Lucy is also predicted to drop aux sometimes (like L1 children)

    1c. Negative transfer V2 in declaratives (i.e. produces sentences like "what play you?" which L1 children never produce.

2. Will Lucy experience problems acquiring do-support in English?

Predictions:

2a. Lucy is predicted to have problems with do-support (like L1 children, as well as adult L2 learners)

Secondary questions

1. Can television affect SLA through motivation?

Prediction: Television can help SLA as the learner can use sources that is interesting.

6.0 Results

In this chapter I will present and discuss the data from Lucy. Section 6.1 gives a general overview of Lucy's language proficiency. In this chapter I will focus on her general ability and see if she is able to produce target like sentences and to see if a vocabulary has been acquired. In section 6.2 I will focus on the features that are relevant, such as do-support and declaratives with a finite lexical verb, to see if syntax has been acquired.

6.1 General language proficiency

It became clear when I first met Lucy that she understands English. As seen in table 1 Lucy has an MLU of 4.4. In the first recording session she answered questions about her toys, was able produce declarative sentences, negatives, and interrogatives with a finite auxiliary present. (1), (2) and (3). This indicates that Lucy has a basic understanding of English and has acquired some aspects of the language.

(1) I want to be Rainbowdash
(2) can you guess what it is?
(3) I don't want it

Table 1 an overview of Lucy´s proficiency

Name of Child	Age	File	No of Child Utterances	MLU
Lucy	4;8	Lucy.01-03.3	457	4.44

Table 2 shows that Lucy has control over copula BE (4), but it seems that she struggles with auxiliary BE as in (5). Lucy produces Copula BE with 90% (9/10) target like use. At the same time auxiliary BE is omitted 67.4% (31/46) of the time as in (5) to (8). Lucy´s use of copula BE, and auxiliary BE is similar to that of English monolingual children (Stromswold 1990, Villies & Devilliers, 1985).

(4) That's a bone

(5) I gonna have all of them.

(6) I gonna eat you forever

 (7) It gonna be big forever

 (8) I gonna put your hands in there

Table 2 Omission of auxiliaries and copula BE in declarative sentences

	Omition	*Target-like*
copula	10% (1/10)	90% (9/10)
Auxiliary	67.39% (31/46)	32.61% (15/46)

6.2 Do-support in negative declaratives and interrogatives

In this section I will present the results in three different constructions: negative declaratives, yes/no questions, and Wh-questions.

6.2.1   Negative declaratives

In her negative declaratives 84.2% (48/57) required the use of do-support (9). When Lucy used do-support in her negative declaratives 85.5% (41/48) were target like (9). Furthermore, in 14.5% (7/48) of her negative declaratives, that require do-support, she was not target like as in (10). In the cases requiring aux or do-support that were non-target like, Lucy made use of "not" (11) 12.3% (7/57) of the cases. This is also a common pattern of English monolingual children (Radford, 1994). Another trait from Lucy is that she made use of "don´t" most of the time in her negative declaratives as in (11). In negative declaratives that required aux Lucy omitted auxiliary BE 11.1% (1/9) of the time as in (12). This is similar to English children as they omit the auxiliary and the use of "not" in front of the verb. In (13) Lucy moves the lexical verb "taste" in front of negation. This is something that L1 children never do and is transfer from Norwegian v2 (Radford, 1994).

(9)   I do not **run** away

(10)   Not **take** it

(11)   I don't **want** to see that

(12)   I not **going** anywhere

Target: I am not going anywhere

(13)   This **tastes** not so horrible

Nor: Dette **smaker** ikke så fælt.

Target: This dosen't **taste** so horrible

Table 3. Omission of auxiliaries in negative declaratives (requiring an auxiliary or do-support) in Lucy´s file.

Negative declaratives	Missing aux	Missing subject	Target like
Auxiliaries/copula	1/9 (11.11%)	2/9 (22.22%)	6/9 (66.66%)
Do-support	Missing do		Target
	7/48 (14.58%)		41/48 (85.42%
Total	8/48 (16.67%)	2/9 (22.22%)	47/57 (82.46%)

6.2.2 Yes/no-questions

In the yes/no-questions produced by Lucy 73.9% (17/23) were target like (14). This is expected as yes/no-questions SAI follows a Norwegian word order. Hence, by transfer from Norwegian to English Lucy is able to produce simple questions in English. Looking closer, 17.4% (4/23) of the yes/no-questions required do-support (15). Of the cases that required do-support 75% (3/4) were target like. The low number of yes/no-questions with do-support

makes it hard to see if she has acquired do-support. There are also two cases where SAI is missing in Lucy´s data as can be seen in (17) and (18).

(14)   Can you hold here?

(15)   Do you see that?

(16)   Have you colors to paint that?

   Target: Do you have colors to paint that?

(17)   You can do that?

(18)   You can do it?

Table 4 Finite verb placement in yes/no questions (requiring Sai or do-support) in Lucy

Yes/no questions

Auxiliaries/copula	Sai	No aux/cop	No sai
	16/18 (88.9%)	0(0%)	2/18 (11.1%)
Do-support	Sai	No do	
	3/4 (75%)	1/4 (25%)	
Total	Target	Non-target	
	17/23 (73.9%)	3/23 (17.4%)	

6.2.3 Wh-questions

The data from Lucy show 12 wh-questions. She is target like in 58.3% (7/12) of her utterances (15). In the target like structures 5/7 examples follows a structure where Norwegian and English are identical (19). In wh-questions Lucy omits the use of an auxiliary 16.7% (2/12) of the time. In the data 33.3% (4/12) of the constructions required do-support (20). 50% (2/4) of the wh-questions requiring do were not target like (21).

(19)   Where **is** eight?

Nor: Hvor **er** åtte?

(20)   Where did you **find** it?

(21)   What you **say**?

Nor: Ka du **si**?

Table 5 Finite verb placement in Wh-questions (requiring SAI or do-support) in Lucy´s files.

Wh-questions	SAI	No aux/cop	No subject	Total
	7/12 (58.3%)	2/12 (16.7%)	1/12 (7.7%)	12/12 (100%)
	SAI	No do		Total
Do-support	2/4 (50%)	2/4 /50%)		4/4 (100%
Total	9/12 (58.3%)	4/12 (33.3%)	1/12 (7.7%)	12/12 (100%)

7.0 Discussion

This section will look at the results from chapter 6.0 and discuss them against the research questions posed in section 5. The section will start by looking at Lucy´s general proficiency in English. Then I will look at Lucy´s acquisition of syntax in general before I look closer at acquisition of do-support. Lastly, I will look at the influence of television on motivation in SLA.

7.1 Lucy´s general language skills

When I met Lucy, She was able to answer direct questions and produce declarative sentences when talking about her toys. She was also able to produce some interrogatives when we were playing games (1)-(2). Table 1 from section 5.0 shows that Lucy has an MLU of 4.44. When

observing Lucy, it was apparent that she had learned enough vocabulary so that she was able produce coherent sentences and make herself understood. Upon learning that Lucy had acquired a vocabulary it was nteresting to see if she had acquired English syntax as well as a vocabulary. A secondary question was to see how this acquisition has happened. Lucy has not had any communicative partner during her acquisition of English. This means that despite the need for communication was not present Lucy has attained motivation to acquire English.

(1) I want to be Rainbowdash

Norwegian: Jeg vil være rainbowdash.

(2) can you guess what it is?

Norwegian: Kan du gjette hva det er?

7.2 Has Lucy acquired English syntax?

7.2.1 Prediction: 1a. Lucy is predicted to have no problem with SAI with aux (due to positive transfer from Norwegian.

Norwegian and English are very similar languages in certain structures that requires SAI. Ringbom (1987) argue that transfer is likely to happen when the two languages are similar. The data show that Lucy is able to form constructions that include SAI in her English (3a,b) and (4a,b). Table two show that in yes/no-questions that included SAI Lucy was target-like in 88.9% (16/18) of her utterances. This is indicative that Lucy does not struggle with SAI in her yes/no questions. In Wh-questions there are fewer examples of SAI. However, in wh-questions that have similar construction as Norwegian Lucy is target like most of the time, in fact she was correct 58.3% (7/12). Lucy had few Wh-questions, however, since do-support is a difficult construction it can be argued that Lucy does not have problems with SAI here either. Disregarding constructions with do-support Lucy was target like 80% (8/10) of her utterances. This pattern shows that when do-support is included Lucy struggles with SAI. This could indicate that positive transfer from Norwegian causes SAI to be easier for Lucy since Norwegian and English are typologically similar.

(3a). Can you **hold** here?

 (3b) Kan du **holde** her?

(4a). **Where** has it gone?

(4b). **Hvor** har den dratt?

(5)   you can do that?

Target: Can you do that?

7.2.2 Lucy is predicted to drop aux sometimes (like L1 children)

Research done by Santelman et al (2002) indicate that when English children have acquired auxiliaries, except for a few mistakes, seem to use them correctly. However, when looking at table two the data from Lucy seem to indicate that she omits the use of auxiliaries quite often. Table two show that Lucy omits the use of auxiliaries 67.4% of the time in declarative structures (6). Furthermore, in her declarative structures Lucy makes use of the verb "gonna" quite often. This is a verb that is often mistaken by English children to be an auxiliary verb. Also, in (6), (7), and (8) "gonna" is followed by an infinitive. This indicates that Lucy might be mistaking "gonna" for an auxiliary. If Lucy is mistaking "gonna" for an auxiliary this indicates that Lucy makes use of auxiliaries. She has just mistaken "gonna" for an auxiliary which indicated by English children's development will be adjusted with more cues in her input. However, it is also possible that it could be negative transfer from Norwegian V3 dialects. Lucy comes from Northern Norway where V3 dialects are quite common. As can be seen in (6) the verb comes in third place. Transfer is quite common, and it is likely to happen where the learner struggle with obtaining a structure (Döpke, 2000). This could be the case with Lucy and auxiliaries. However, as she is able to use SAI quite consistently in interrogatives it is most likely a mistake from Lucy that will be corrected with more input and cues.

(6). What you **going** to get me?

Nor: Ka du **ska** gi mæ?

Target: What are you going to get me?

(7). I **gonna** have all of them

Target:I am **gonna** have all of them

Norwegian: Jeg **skal** ha alle sammen

With regards to copula BE on the other hand Lucy seems to be in control. In the cases where copula BE is needed (4) Lucy is target like 90% (9/10) times. In English children copula BE is acquired before auxiliaries (Villies & Devilliers, 1985). Looking at Lucy´s limited amount of input, it is possible that Lucy needs more input for auxiliaries to fall into place.

7.2.3. Negative transfer V2 in declaratives (i.e. produces sentences like "what play you?" which L1 children never produce).

Hulk & Muller (2000) argue that negative transfer is likely to happen where the target structure is difficult or not acquired yet. Because of this negative transfer is likely to happen in V2 declaratives such as in (8). In (8) Lucy places the verb in front of the negation, and this is something that English children never do (Radford 1994). This indicate that in some areas Lucy struggle with English structures and then transfers Norwegian structures to compensate. On the other hand, in the data there is only one case of this happening (8). If this is not something that happens often it could be a slip of tongue. However, it is an indication that Lucy struggles with certain aspects of English such as do-support (which will be discussed further in the next section) and makes use of negative transfer to communicate.

(8). This tastes not so horrible (negative transfer v2)

  Nor: Dette **smaker** ikke så fælt.

  Target: This dosen't **taste** so horrible

7.2.4. Will Lucy experience problems be acquiring do-support in English?

So far I have looked at Lucy´s proficiency in English with regards to some factors that can be a part of deciding if she has truly acquired English. So far she has, as predicted, not had problems with SAI. Regarding auxiliaries it is a bit ambiguous if she struggles or not, but it is possible that she has misunderstood the verb "gonna" as an auxiliary, which is also common with English children. This could indicate that with more input Lucy will learn that "gonna" is not an auxiliary. Lastly, there is also some evidence that Lucy struggles with some structures in English as she has a case of V2 where she has moved the lexical verb in front of the negation. However, in part the data indicates so far that Lucy has acquired the structures discussed so far. Now I will turn to do-support and see if this structure is acquired or not.

7.2.4.1 Prediction 2. Lucy is predicted to have problems with do-support (like L1 children, as well as adult L2 learners).

Do-support is notoriously difficult to acquire in English by Norwegian learners. As previously discussed, Norwegian and English are two languages that in many parts are typologically similar. Norwegian and English share many structures in declarative sentences, and SAI in interrogatives. When the finite verb in a sentence is lexical problems usually occur. Norwegian moves the lexical verb to 2nd place, but in English they apply do-support. In the previous section positive transfer was discussed with regards to SAI, however, with do-support positive transfer is not possible. At this point the learner must either make use of do-support or, as claimed by Hulk & Muller (2000), negative transfer will be applied by the learner. In Lucy´s data there are different results with regards to negative declaratives and interrogatives. In negative declaratives Lucy had 48 cases of do-support where 85.4% (41/48) were target like (9). It seems Lucy is able to make use of do-support in negative declaratives quite often and is target like most of the time. Lucy also makes use of "don´t" 88.10% (37/42) in negative declaratives. The use of "don´t" is quite common with English children when they start acquiring negative declaratives (Bellugi, 1967, Radford, 1994). This is an indication that Lucy follows the progression of English children in the acquisition process.

(9) I do not run away

(10) Do you see that?

(11) Where did you find it?

Looking at do-support in interrogatives, table 3 show that there are only four cases of do-support in yes/no questions. Since there were so few cases of do-support it is possible that Lucy avoids the structure as it is difficult. Döpke (2000) argues that when a structure is difficult it is avoided with other structures that are "easier" or more similar to their L1. On the other hand, Lucy was target like 75% (3/4) of the time (6). Even though there are few examples, Lucy is target like most of the times when this structure is used. This could indicate some partial acquisition, but there is still not enough input. There are also some ambiguous examples with regards to acquisition (7). In BrE it is grammatical, while it is not grammatical in AmE. This could be because of Lucy´s source of input with regards to dialects, or it could be transfer from Norwegian.

(6). Do you see that?
(7). Have you colors to paint that?
Target: Do you have colors to paint that?

In Wh-questions the use of do-support is similar to that in yes/no-questions. Lucy had four cases requiring do-support where she was target like 50% (2/4) of the time. In example (8) do-support is omitted. However, when do-support is omitted the structure is similar to Norwegian V3 word order (8b). The similarity to Norwegian V3 order indicates negative transfer from Norwegian to English.

 (8). What you say?
(8b) Nor: Ka du si?
Target: What did you say?

It seems that Lucy is quite proficient in inserting do-support in negative declaratives. However, with regards to interrogatives it seems that Lucy is still struggling. In many cases she transfers Norwegian syntax to create a sentence and omits do-support. This shows that she struggles with do-support. On the other hand, it is also possible that she has not yet received enough cues in her input. English children also start using "don´t" in their negative

declaratives before they move on to interrogatives. If this is the case, then it could be a matter of receiving enough cues for acquisition to happen.

Westergaard (2003) argued that the reason for Norwegian school children not acquiring do-support was because of a lack of cues in their controlled input from textbooks. While Lucy has had plenty of authentic input from television that is governed by everyday speech and should have plenty of examples of do-support in them. In SCT interaction is seen as a crucial aspect of SLA (Gass et al, 1998). While cues in the input is important it is also possible that for the learner to adjust the learner must receive feedback and corrections from others to advance their proficiency. Because of Lucy´s lack of interaction in English it is possible that she does not pick up on mistakes in her language. Kuhl, Tsa, and Liu (2003) argues that the video deficit hypothesis indicates that toddlers learn better from in-person learning than television. This is similar to Vygotsky (1978) who believed that social interaction is crucial in a learning process, and the learner cannot be separated from the social context in which he/she operates. Concrete experiences and interaction within the social community is essential to learning (Dornyei, 2009). Feedback and corrections are crucial to help a learner move on outside of its current zone of development (Vygotsky, 1978). The data from Lucy could indicate that for acquisition to happen with difficult constructions cues only in input is not enough. The learner must also receive cues in the form of feedback and corrections from a communicative partner.

The data so far indicates a partial acquisition of English syntax. Lucy does not have any problems with SAI as it is similar to Norwegian and can be adjusted by positive transfer. Regarding auxiliaries Lucy has many mistakes, but most of these also includes "gonna" which is often mistaken for an auxiliary by English children as well. There is also some negative transfer of V2 from Norwegian to English, however, there are very few mistakes and can be taken as a mistake from Lucy. Lastly, regarding do-support it is obvious that in interrogatives it is not acquired yet, however, it is possible that with more input also this structure can be acquired as it seems Lucy is following a pattern of acquisition that is similar to English children.

Fisch (2000) argue that the distance between the educational content and the narrative is imperative to adjust the learning to children´s limited resources. Hence, age-appropriate television shows that are adjusted to children could help acquisition. Lucy has been exposed

to children´s tv-shows that focus on learning such as Peppa pig and Sesame street, which is adjusted to children.

7.3 Secondary questions

7.3.1 Can television affect SLA through motivation?

Motivation is a crucial aspect of acquiring a language. For motivation to manifest in a learner there must be a reason for acquiring the language, either intrinsic or extrinsic motivation (Williams and Burden, 1997). Lucy could find that a major motivator for her is to acquire a language to communicate with the characters in her television show. As a motivator for learning is the ability to communicate with another culture (MacIntyre, 2007). The "world" on screen could act as a motivator for understanding what is happening. It is possible that children's tv could imitate some of the interaction that happens in real life. Research has indicated that the rewards in computer games can stimulate the reward system in the brain in the same way as social interaction does (Kuppens, 2010). If this is the case, then television shows that talk to the viewer could work in the same manner with regards to language acquisition. Toddlers are not able to differentiate between the television and the real world (Kuhl, 2007). Using this as a basis it is possible that young children can view a television show with its own world as a community, and with its interactive nature can "trick" the child into wanting to be a part of that community. Looking at the sociocultural model where social interaction and the need for positive feedback when acquiring a skill is crucial for further motivation then a television show for children could act in the same way. Giving the child motivation to acquire the skill so it can communicate with the characters and understand what the characters are saying.

Motivation through the need for communication is a phenomenon that happens across age groups, also with teenagers across the world who wants to learn Norwegian. Due to the popular television show "Skam" there are many who is acquiring Norwegian («Skam» tar av i kina, 2017). What could be interesting is to investigate if they acquire syntax, or if they only acquire vocabulary as previous research indicate (D´yewalle and Apvakanum, 1997). However, there is another motivator in Lucy´s life. Namely that she might have acquired language through television, but she is still living with her parents. It is possible that the social

nature and feedback she receives from them activates the reward system in her brain and she understands that if she speaks in English, she will be rewarded with attention. Noels et al. (1999) found that a communicative style and a sense of self determination promoted enjoyment. Dornyei (2007) emphasizes the importance of good interpersonal relations. It could be the case that Lucy´s parents provide social stimuli and cues, while the television show provides cues through the input provided.

8. Conclusion

The theme of this thesis was if SLA is possible through limited input with television shows as a source. The questions were: *Has Lucy acquired English Syntax?* With a secondary question of *Can television help SLA?*

The data indicate that Lucy has partially acquired English Syntax. The data show that Lucy has acquired vocabulary as was expected. Furthermore, as predicted Lucy did not have problems with SAI in her constructions due to positive transfer from Norwegian. Regarding auxiliaries she drops them more often than predicted, however, she also follows the pattern of English children. This could indicate a lack of input. With regards to negative transfer Lucy did have a problem with transferring V2 rule to English, but only in one occasion. This could be a slip of tongue, rather than a pattern.

Regarding do-support Lucy was able to use "don´t" in negative declaratives and construct target-like structures. In interrogatives Lucy was only target like 50% of the time. The interrogatives that did not employ do-support followed a construction that is similar in Norwegian and English. This indicates that Lucy has not yet received enough input to acquire these constructions. On the other hand, her source of input is rich with examples of do-support. Hence, it could be that due to lucy´s lack of interaction she has not received enough cues through feedback and corrections to acquire the difficult structures in English.

To conclude this thesis, it is evident that a partial acquisition has happened through positive transfer from Norwegian to English. Lucy has acquired SAI and drops aux, sometimes as predicted. With regards to do-support Lucy has not acquired this structure, yet. However, due to her proficiency in negative declaratives with do-support it could be that she has not yet received enough cues in her input to acquire this structure.

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