Paper 3 Q2 Child Language Acquisition

How to tackle the Transcript

Introduction - context, identify the interlocutors, identify the stage the child is in (based on the age and what you have just read)

In your essay, discuss/analyze (PEET) 1) Child Directed Speech (Caregiver) and 2) Linguistic Features of the Child using theories.

Conclusion

THEORIES OF LANGUAGE ACQUISITION

Over the last fifty years, several theories have been put forward to explain the process by which children learn to understand and speak a language. They can be summarized as follows:

Theory	**Central Idea**	Individual **with theory**
Behaviourist	Children imitate adults. Their correct utterances are reinforced when they get what they want or are praised.	Skinner
Innateness	A child's brain contains special language-learning mechanisms at birth.	Chomsky
Cognitive	Language is just one aspect of a child's overall intellectual development.	Piaget
Interaction	This theory emphasises the interaction between children and their care-givers.	Bruner & Vygosty
Functional	The child develops language in order achieve an outcome and participate in social interactions	Halliday

We shall consider each of these in turn. Before we do, it is important to recognise that they should not be seen simply as conflicting theories, replacing each other in a sequence. Although Behaviourism is now seen as offering only a very limited explanation, each theory has added to our overall understanding, placing emphasis on different aspects of the process.

<u>Behaviourism</u>

The behaviorist psychologists developed their theories while carrying out a series of experiments on animals. They observed that rats or birds, for example, could be taught to perform various tasks by encouraging habit-forming. Researchers rewarded desirable behavior. This was known as **positive reinforcement**. Undesirable behaviour was punished or simply not rewarded **- negative reinforcement**.

The behaviourist B. F. Skinner then proposed this theory as an explanation for language acquisition in humans. In *Verbal Behaviour* (1957), he stated:

> "The basic processes and relations which give verbal behaviour its special characteristics are now fairly well understood. Much of the experimental work responsible for this advance has been carried out on other species, but the results have proved to be surprisingly free of species restrictions. Recent work has shown that the methods can be extended to human behaviour without serious modifications."

Skinner suggests that children are blank slates - “Tabula Rasa” He suggested that a child imitates the language of its parents or carers. Successful attempts are rewarded because an adult who recognises a word spoken by a child will praise the child and/or give it what it is asking for. Successful utterances are therefore reinforced while unsuccessful ones are forgotten or result in negative reinforcement.

Limitations of Behaviourism
While there must be some truth in Skinner's explanation, there are many objections to it.

· Language is based on a set of structures or rules, which could not be worked out simply by imitating individual utterances. The mistakes made by children reveal that they are not simply imitating but actively working out and applying rules. For example, a child who says "drinked" instead of "drank" is not copying an adult but rather **over-applying a rule**. The child has discovered that past tense verbs are formed by adding a /d/ or /t/ sound to the base form. The "mistakes" occur because there are irregular verbs which do not behave in this way. Such forms are often referred to as intelligent mistakes or **virtuous errors**.

· The vast majority of children go through the same stages of language acquisition. There appears to be a definite sequence of steps. We refer to as **developmental milestones**. Apart from certain extreme cases (see the case of Genie), the sequence seems to be largely unaffected by the treatment the child receives or the type of society in which s/he grows up.

· **Children are often unable to repeat what an adult says**, especially if the adult utterance contains a structure the child has not yet started to use. The classic demonstration comes from the American psycholinguist David McNeill. The structure in question here involves negating verbs:

> **Child**: Nobody don't like me
> **Mother**: No, say, "Nobody likes me."
> **Child**: Nobody don't like me.
> *(Eight repetitions of this dialogue)*
> **Mother**: No, now listen carefully: say, "Nobody likes me."

Child: Oh! Nobody don't likes me.
(McNeil in T*he Genesis of Language*, 1966)

· Few children receive much explicit grammatical correction. **Parents are more interested in politeness and truthfulness**. According to Brown, Cazden and Bellugi (1969): "It seems to be truth value rather than well-formed syntax that chiefly governs explicit verbal reinforcement by parents - which renders mildly paradoxical the fact that the usual product of such a training schedule is an adult whose speech is highly grammatical but not notably truthful." (cited in Lowe and Graham, 1998)

· There is evidence for a **critical period** for language acquisition. (**Lenneberg** (1967) says this critical period is between 2 and puberty). Children who have not acquired language by the age of about seven will never entirely catch up. The most famous example is that of Genie, discovered in 1970 at the age of 13. She had been severely neglected, brought up in isolation and deprived of normal human contact. Of course, she was disturbed and underdeveloped in many ways. During subsequent attempts at rehabilitation, her carers tried to teach her to speak. Despite some success, mainly in learning vocabulary, she never became a fluent speaker, failing to acquire the grammatical competence of the average five-year-old.

Nativism

Noam Chomsky published a criticism of the behaviourist theory in 1957. In addition to some of the arguments listed above, he focused particularly on the **impoverished language input** children receive. Adults do not typically speak in grammatically complete sentences. In addition, what the child hears is only a small sample of language.

Chomsky concluded that children must have an **inborn faculty for language acquisition**. According to this theory, the process is **biologically determined** - the human species has evolved a brain whose neural circuits contain linguistic information at birth. The child's natural predisposition to learn language is triggered by hearing speech and the child's brain is able to interpret what s/he hears according to the underlying principles or structures it already contains. This natural faculty has become known as the **Language Acquisition Device (LAD).** Chomsky did not suggest that an English child is born knowing anything specific about English, of course. He stated that all human languages share common principles. (For example, they all have words for things and actions - nouns and verbs.) It is the child's task to establish how the specific language s/he hears expresses these underlying principles.

For example, the LAD already contains the concept of verb tense. By listening to such forms as "worked", "played" and "patted", the child will form the hypothesis that the past tense of verbs is formed by adding the sound /d/, /t/ or /id/ to the base form. This, in turn, will lead to the "virtuous errors" mentioned above. It hardly needs saying that the process is unconscious. Chomsky does not envisage the small child lying in its cot working out grammatical rules consciously!

Chomsky's ground-breaking theory remains at the centre of the debate about language acquisition. However, it has been modified, both by Chomsky himself and by others. Chomsky's original position was that the LAD contained **specific knowledge about language**. Dan Isaac Slobin has proposed that it may be more like a **mechanism for working out the rules of language**:

> "It seems to me that the child is born not with a set of linguistic categories but with some sort of process mechanism - a set of procedures and inference rules, if you will -

that he uses to process linguistic data. These mechanisms are such that, applying them to the input data, the child ends up with something which is a member of the class of human languages. The linguistic
universals, then, are the *result* of an innate cognitive competence rather than the content of such a competence."

Evidence to support the innateness theory

Work in several areas of language study has provided support for the idea of an innate language faculty. Three types of evidence are offered here:

1. Slobin has pointed out that human anatomy is peculiarly adapted to the production of speech. Unlike our nearest relatives, the great apes, **we have evolved a vocal tract** which allows the precise articulation of a wide repertoire of vocal sounds. Neuro-science has also identified specific areas of the brain with distinctly linguistic functions, notably **Broca's area** (grammar) **and Wernicke's area**.(language processing). Stroke victims provide valuable data: depending on the site of brain damage, they may suffer a range of language dysfunction, from problems with finding words to an inability to interpret syntax. Experiments aimed at teaching chimpanzees to communicate using plastic symbols or manual gestures have proved controversial. It seems likely that our ape cousins, while able to learn individual "words", have little or no grammatical competence. **Pinker** (1994) offers a good account of this research.

2. The formation of **creole varieties of English** appears to be the result of the LAD at work. The linguist Derek Bickerton has studied the formation of Dutch-based creoles in Surinam. Escaped slaves, living together but originally from different language groups, were forced to communicate in their very limited Dutch. The result was the restricted form of language known as a pidgin. The adult speakers were past the critical age at which they could learn a new language fluently - they had learned Dutch as a foreign language and under unfavourable conditions. Remarkably, the children of these slaves turned the pidgin into a full language, known by linguists as a creole. They were presumably unaware of the process but the outcome was a language variety which follows its own consistent rules and has a full expressive range. Creoles based on English are also found, in the Caribbean and elsewhere.

3. Studies of the **sign languages used by the deaf** have shown that, far from being crude gestures replacing spoken words, these are complex, fully grammatical languages in their own right. A sign language may exist in several dialects. Children learning to sign as a first language pass through similar stages to hearing children learning spoken language. Deprived of speech, the urge to communicate is realised through a manual system which fulfills the same function. There is even a signing creole, again developed by children, in Nicaragua. For an account of this, see Pinker.

Limitations of Chomsky's theory

Chomsky's work on language was theoretical. He was interested in grammar and much of his work consists of complex explanations of grammatical rules. He did not study real children. The theory relies on children being exposed to language but takes no account of the interaction between children and their carers. Nor does it recognise the reasons why a child might want to speak, the functions of language.

In 1977, Bard and Sachs published a study of a child known as Jim, the hearing son of deaf parents. Jim's parents wanted their son to learn speech rather than the sign language they used between themselves. He watched a lot of television and listened to the radio, therefore

receiving frequent language input. However, his progress was limited until a speech therapist was enlisted to work with him. Simply being exposed to language was not enough. Without the associated interaction, it meant little to him.
Subsequent theories have placed greater emphasis on the ways in which real children develop language to fulfil their needs and interact with their environment, including other people.

The Cognitive Theory

The Swiss psychologist Jean Piaget placed acquisition of language within the context of a child's mental or cognitive development.

1. **Sensorimotor stage** (birth to 2 years): In this stage, infants acquire language by using their senses and motor abilities to explore the world around them. Language at this stage is limited to simple sounds, cries, and gestures that are used to communicate basic needs and desires.
2. **Pre-operational stage** (2 to 6 years): In this stage, children begin to develop more complex language skills and can use symbols and words to represent objects and ideas. Their vocabulary increases, they use their imagination more, and question everything. At this stage the child is still largely egocentric. However, they still have difficulty understanding abstract concepts and using logical reasoning.
3. **Concrete operational stage** (6 to 11 years): In this stage, children begin to develop more sophisticated language skills and can use logic and reasoning to solve problems. They develop more empathy (other's point of view)They can also understand more abstract concepts and use language to express complex thoughts and ideas.
4. **Formal operational stage** (11 years and up): In this stage, individuals have fully developed language skills and can use abstract reasoning and complex thought processes. They can also use language to express complex emotions, ideas, and beliefs.

He argued that a child has to understand a concept before s/he can acquire the particular language form which expresses that concept.
A good example of this is seriation. There will be a point in a child's intellectual development when s/he can compare objects with respect to size. This means that if you gave the child a number of sticks, s/he could arrange them in order of size. Piaget suggested that a child who had not yet reached this stage would not be able to learn and use comparative adjectives like "bigger" or "smaller".

Object permanence is another phenomenon often cited in relation to the cognitive theory. During the first year of life, children seem unaware of the existence of objects they cannot see. An object which moves out of sight ceases to exist. By the time they reach the age of 18 months, children have realised that objects have an existence independently of their perception. The cognitive theory draws attention to the large increase in children's vocabulary at around this age, suggesting a link between object permanence and the learning of labels for objects.

Limitations of the Cognitive Theory
During the first year to 18 months, connections of the type explained above are possible to trace but, as a child continues to develop, it becomes harder to find clear links between language and intellect. Some studies have focused on children who have learned to speak fluently despite abnormal mental development. Syntax in particular does not appear to rely on general intellectual growth.

Interactionist Theories

In contrast to the work of Chomsky, more recent theorists have stressed the importance of the language input children receive from their care-givers. Language exists for the purpose of communication and can only be learned in the context of interaction with people who want to communicate with you. Interactionists such as Jerome Bruner suggest that the language behaviour of adults when talking to children (known by several names by most easily referred to as child-directed speech or CDS) is specially adapted to support the acquisition process. This support is often described to as **scaffolding** for the child's language learning. Bruner also coined the term Language Acquisition Support System or LASS in response to Chomsky's LAD. Colwyn Trevarthen studied the interaction between parents and babies who were too young to speak. He concluded that the turn-taking structure of conversation is developed through games and non-verbal communication long before actual words are uttered.

Lev Vygotsky (1978) also an Interactionist, stated that learning is an active not passive process. He suggested that children move away from solo work in the classroom and work in groups and pairs - children don't know what they don't know until they talk about it! He came up with **MKO** (More Knowledgeable Other) and the Zone of Proximal Development **(ZPD**). He was very into the idea of scaffolding.

Limitations of interactionist theories

These theories serve as a useful corrective to Chomsky's early position and it seems likely that a child will learn more quickly with frequent interaction. However, it has already been noted that children in all cultures pass through the same stages in acquiring language. We have also seen that there are cultures in which adults do not adopt special ways of talking to children, so CDS may be useful but seems not to be essential.

For example, in some indigenous cultures in Mexico and Guatemala, parents and caregivers tend to speak to children in the same way that they would speak to adults, without using exaggerated intonation or simplifying their vocabulary.

Functional Theory - Why Children Learn to Speak

Functional Theory - Halliday, a framework that describes how language functions in social contexts. According to this theory, language is not just a set of rules or structures, but it is a system for making meaning and communication in different social contexts.

In the context of child language acquisition, Halliday's functional taxonomy theory suggests that children learn to use language in different functions or purposes in order to get a certain outcome. Here are the 7 functions and examples of each: **IRIP RHI**

1. Instrumental: Language used to fulfill basic needs and obtain goods or services. For example, a child saying "I want water" to get a drink.

2. Regulatory: Language used to control others or direct their behavior. For example, a child saying "Don't touch that!" to stop someone from touching something they shouldn't.

3. Interactional: Language used to form social relationships and interact with others. For example, a child saying "Hi, my name is Sarah. What's your name?" to initiate conversation.

4. Personal: Language used to express feelings, opinions, and identity. For example, a child saying "I don't like that" to express their dislike of something.

5. Representational: Language used to convey information and knowledge. For example, a child saying "The sun is a star" to convey a fact.

6. Heuristic: Language used to explore and learn about the environment. For example, a child saying "What's that?" to learn the name of an object.”But…. WHY?”

7. Imaginative: Language used to create stories, role-play, and express creativity. For example, a child saying "Once upon a time, there was a magical unicorn" to start a story.

John Dore had very similar functions to Halliday, but his no.8 on the list was Practicising - using the language when noone is around.

As stated earlier, the various theories should not be seen simply as alternatives. Rather, each of them offers a partial explanation of the process.

<u>Structuralist Stages of Child Language Acquisition (Universal)</u>

1. **The Babbling Stage:** This stage occurs from birth to around **12 months old.** At this stage, children produce sounds that are unrelated to the language spoken in their environment. They experiment with the sounds of all languages, producing a range of sounds including vowels, consonants, and sound combinations, such as "ba-ba-ba" or "ma-ma-ma."
2. **The Holophrastic Stage**: This stage occurs from around **12 to 18 months old**. At this stage, children start to produce single words that represent a complete thought or concept. For example, a child may say "milk" to indicate that they want a drink. (Estimated that by 18 months children can speak 50 words but can understand 250 words)
3. **The Two-Word Stage**: This stage occurs from around **18 to 24 months old**. At this stage, children begin to produce two-word phrases that reflect the underlying grammatical structure of the language they are learning. For example, a child may say "daddy shoe" to indicate that they want their father's shoe.
4. **The Telegraphic Stage:** This stage occurs from around **24 to 30 months old**. At this stage, children start to produce sentences that are missing function words, such as articles and prepositions. For example, a child may say "me want cookie" instead of "I want a cookie."
5. **The Post-Telegraphic Stage:** This stage occurs from around **30 months old** and continues throughout childhood. At this stage, children develop more complex sentence structures, using function words and grammatical rules correctly. For example, a child may say "I saw a bird flying in the sky" to describe a past event.

(if the child is older than 4 or 5 you can refer to Piaget’s stages of language acquisition)

Questions to ask as you look at the transcript : 1) **Child** 2) **Caregiver**

1) The **Child's Utterances** (look and comment on the following linguistic features)

Lexis and Semantics	What kind of lexis does the child use, things you can comment on? - Word classes? Concrete nouns first. Chair. Dog. Mama - Overextension e.g. dog! (all animals with four legs) Underextension e.g. shoes (word just belongs to them ..my shoes) - Rescorla overextensions can be by category or function. - Object permanence - things still exist without seeing them. Shows signs of abstract thinking (**Piaget**) - Seriation - able to compare big, bigger biggest (**Piaget**) - Use of inflections - **ing**, **s** ,**ed…** e.g. sheeps, goed (in this example when used incorrectly, they are virtuous errors/logical mistakes) Jean **Berko** (1958) Wug test **Cuthenden** - 3 stages of inflection (-ing, -ed) development 1. inconsistent usage sheeps, goed 2.consistent, but still might get virtuous errors (if they don't know the plural mouses / mice 3.grasps irregular forms of verbs (goed becomes went) Kathleen **Neilson** (1973) 60% of first words are nouns naming things, followed by verbs then modifiers(adj/adverbs) **Chomsky** said the brain acts like a sieve - using only the necessary words to communicate. Link to Functional Theory, **Halliday** IRIP RHI Jean **Aitchinson** (1987) 3 processes of semantic development: 1) labeling (attaching sound to object), 2) packaging (word has many meanings e.g. bottle) 3)Networking building - words can have opposites big-small, synonyms little-small
Grammar	**Are the following used as standard speech?** Verb tenses - Do virtuous errors occur - uses past, present, future, continuous (ing) **Chomsky** Questions - **Piaget** (pre-operational stage), **Halliday** (Heuristic function) Negation - How they form the sentence (**Bellugi**) Pronoun usage - subject pronoun (I), object (me) "me go to park" Contrastive determiners/dexis "this one, that one" Ursula **Bellugi** (1971) Questions: 4 stages in how their questioning develops 1 at holophrastic stage e.g. food? (intonation up)

	2. Inversion of auxiliary verbs e.g. do mummy? 3.Interrogative / questions with Who/what/when/why 4. Tag-questions e.g. …. Isn't it? Negation development 1.no /negation at the start of sentence "no go" 2. no/negation moves to the middle of the sentence "me no go" 3.attaches negation to an auxiliary verb "I don't want to go" Pronoun usage 1.child uses name "Iris go" 2.child uses pronouns but mixes up subject pronoun (I) with object pronoun (me)... "me go" 3.child starts using correctly These patterns show children have an innate capacity to organize, grammar and syntax. It s like the brain is a sieve and as the child acquires language/language develops it begins with holding on to the most necessary words, grammar, syntax in order to functionally get points across. (shout out to Chomsky) Rodger **Brown** (1973) studied 3 children over time on Grammar development. Concluded that patterns emerge: 1. Agent+action e.g. "Daddy go" 2. Action+noun e.g. "mummy chair" 3. Object+location e.g. "car home" At the telegraphic stage Subject+verb+complement e.g. "doggie is naughty"
Phonology	Is there evidence that the child struggles with certain phonemes/sounds? This is because muscles in the mouth and throat are not yet developed. Easiest ones are: - plosive (bilabial) e.g. /p//b/ - Plosive (alveolar) e.g. /d/ - Nasal (bilabial) e.g. /m/ - Glide(bilabial) e.g./w/ More difficult ones are: - Fricative (dental) /th/eatre and /th/e - Fricative (alveolar) /s/ and /z/ - Liquid (alveolar) /r/ **How does the child overcome these difficulties?** ● Addition e.g. doggie (aka diminutives - easier to say then dog) ● Deletion e.g. dog - do, cup - cu ● Substitution e.g. that - /d/at, red - /w/ed ● Assimilation - copying sound from end of word e.g. dog- gog ● Consonant cluster reduction - spider - pider (dropping extra con.) ● Reduplication - dada, mama ● Deletion of unstressed syllables e.g. tomato - mato, banana -nana

	Berko and Brown (1969) /fis/ phenomena the child can recognise the correct pronunciation but cannot say it Evidence : won't acknowledge the incorrect usage when said back to them /fis/ , instead only respond when said correctly /fish/.
Pragmatics	(aka tone, voice, gestures, body language) Learned through imitation and reinforcement often by the MKO (**Vygotsky**) to further build relationships (**Halliday** Interactional and personal function) Does the child show e.g.politeness features:? - Turn-taking (no overlaps?) - Fulfilled adjacency pairs - answering questions when asked - Hedging - social softeners e.g. "actually, I just, yes but…" - Modal auxiliary verbs e.g. "can I, could you, should I" - Grice's 4 maxims: quality, quantity, relevance, manner.

Questions to ask as you look at the transcript - 2) **Caregiver's Child Directed Speech**

(look and comment on how the Caregiver uses **Child Directed Speech - CDS**)

Child Directed Speech aims to: -Attract and hold the child's attention. -Help the process of breaking down language into understandable chunks. -Make the conversation more predictable by referring to the here-and-now.	**<u>Does the Carer use the following?</u>** -Simple lexis, syntax and grammar -Shorter utterances. Slower pace. -Matched MLU - Mean Length Utterances -Pitch/stress and exaggerate certain words to emphasize words that are important -Interrogatives (questions) to move the conversation and encourage responses. ● Imperatives are turned into questions "do you want to tidy up the toys?" ● Tag-questions "you did a good job, <u>didn't you</u>?" -Good turn-taking? -Matched adjacency pairs?Q?A -Repetition - carer copies child's use of diminutives"dog<u>gie</u>" -Recasting - carer repeats to add more detail and/or corrects the language e.g. when the child says something partly unintelligible adults often echo the utterance replacing the unclear but with a question to encourage them to repeat it.. -Back channeling - showing attentiveness in a conversation - verbal "uh huh, mmm" and non-verbal nodding head and gestures (Yn-gve 1970) -Praise and encouraging good conversation/behavior (**Skinner**) -Expansion - child says "book", carer says "do you want to read the book?"

	-Politeness features to model “please, thank you, may I” (MKO Vygotsky, Halliday Interactional function Some additional CDS supporters of CDS: - A 4 year old can do CDS with a 2 year old - (**Hirsch-Paschek** and **Tremain**) - CDS helps babies pick up words faster. The slower and repetitive the tone of CDS helps children pay more attention (**Boyles** 2005) - -Mothers who talk more to their child their children have larger vocab (**Clarke & Stewart** -1973)

Additional Information

Mean Length of Utterance (MLU) is a way to measure a child's language development based on the average length of their spoken sentences. By counting the number of words or parts of words in a sample of the child's speech, we can determine their MLU. As children acquire more vocabulary and grammar, their MLU typically increases. MLU is a helpful tool for tracking a child's language development and identifying potential delays or disorders.

Clarke-Stewart (1973)

Found that children whose mothers talk more have larger vocabularies.

Katherine Nelson (1973)

Found that children at the holophrastic stage whose mothers corrected them on word choice and pronunciation actually advanced *more slowly* than those with mothers who were generally accepting.

(Brown, Cazden and Bellugi 1969)

Found that parents often respond to the TRUTH value of what their baby is saying, rather than its grammatical correctness. For example, a parent is more likely to respond to “there doggie” with “Yes, it’s a dog!” than “No, it’s there is a dog.”

Berko and Brown (1960)

Brown spoke to a child who referred to a “fis” meaning “fish”. Brown replied using “fis” and the child corrected him again but saying “fis”. Finally Brown reverted to “fish” to which the child responded “Yes, fis.” This shows that babies do not hear themselves in the same way that they hear others and no amount of correction will change this. (ties back to why you shouldn't over-correct a child's speech.)

David Crystal 5 stages -

1. Purposes: to get something they want, to get someone’s attention, to draw attention to something (could be holophrastic, two words phase) uses intonation for questions
2. Ask questions who,where,what, learning characteristics of things, learn comparisons up/down

3. Varying tone of voice to ask questions. Refer to events in the past alot, more grammar,sentence structure has expanded SVO and auxiliary verbs, and prepositions
4. Begin to explain things, ask for explanations, make a lot of requests
5. Use language for all aspects of life, hypothetically, over time period (7yr old)