



Chapter 2

Theories of spoken language development

In this chapter you will:

- Gain an understanding of the key theories behind spoken language development
- Consider how language development theories have altered over the last century
- Understand the influence of environmental factors on language development
- Explore what is meant by child-directed speech and how this is characterised

2.1 An overview of theories behind spoken language development

The debate surrounding how and why children's language develops has often been over-simplified into a discussion of nature versus nurture. Over the last century, thinking has evolved in such a variety of ways that it is now thought that a number of co-existing factors lead to development of language and that the polar opposites of either innateness (nature) or social input (nurture) present a crude approach. The degree to which external environmental and social factors play a part in language development has been explored most prominently by B.F. Skinner, Jerome Bruner, Lev Vygotsky and Michael Tomasello (but in very different ways). Noam Chomsky and to some degree Eric Lenneberg suggested the importance of an internal system of development.

Further research into the way the brain works and consideration of the ways in which thought and language are interconnected has added another dimension to the issues. Recent studies of the physical development of the brain emphasise its plasticity and its receptivity to language. These approaches may focus more obviously on the 'nature' approach to language development. It is important to recognise that there is no definitive explanation of the development of language in children but an understanding of the many contrasting perspectives is essential to understanding the complexity of the issue.

ACTIVITY 2.1

Your own theories about language development

Think about your own language learning. To what degree was it influenced by the caregivers around you (or other influential people)? To what extent do you agree with the idea that language is separate from external factors?

Now try to create a list of reasons to support the roles of both nature and nurture in language learning. You may wish to list these in a table like the following, which contains an initial suggestion for each perspective. After reading this chapter, you may wish to add to your table.

Nature – language development connected to your biological make-up	Nurture – language development connected to the environment in which you grow up.
Language development of siblings living in the same environment may be very different, suggesting that there is a biological element to the process.	Young children will learn the language of their key caregivers. If living in a bilingual household, for example, children can often be fluent in two languages by the age of five. This suggests a direct relationship between parental input and language(s) learned).

2.1.1 Behaviourism

Behaviourism is the term that sums up the theory that learning and subsequent behaviour are largely down to imitation. Ivan Pavlov was a physiologist working in the late nineteenth and early twentieth centuries. The impact of Pavlov's experiments on dogs has been enduring. When the idiom 'like Pavlov's dogs' is used, it is normally a negative expression suggesting that someone is unquestioningly behaving in a particular way as if the response is beyond their control.

KEY TERM

Behaviourism: a learning theory that focuses on the idea that actions are generally a response to external factors

In 1902, Pavlov conducted research into the amount of saliva produced by dogs when they saw something associated with the normal production of food. He introduced a bell that rang whenever food appeared. The eventual result was that the dogs would produce more saliva than normal on hearing the bell regardless of whether there was food. This response was not something that was consciously learned but developed because of associations with those previously neutral objects. Pavlov concluded that conditioning can occur, whereby a particular physical behaviour is triggered through associations with people, places or events.

This classic notion of conditioning was then developed in the early part of the twentieth century, most notably by the psychologists John B. Watson and Rosalie Rayner (1920), who suggested that the pattern of stimulus and response can be extended to language. Watson and Rayner also conducted the 'Little

Albert' experiment, whereby a baby of 9–12 months was exposed to various animals and stimuli, none of which initially worried him. Every time Little Albert touched a white rat, a loud noise was then made behind the child. Eventually, Little Albert developed a phobia of the rat as he associated it with the noise that he hated. This suggests that children can be conditioned to respond in a particular way to something that was previously a neutral stimulus. This initial development of the theory of classical conditioning paved the way for similar conclusions to be drawn about language development, suggesting that if language is a behaviour then it is perhaps something that can be learnt through exposure to the environment in which this language is used. Children will be conditioned to use language as it is being used around them.

B.F. Skinner (1957) moved beyond classic conditioning to consider **operant conditioning**. He suggested that positive and negative reinforcement are critical to the conditioning process. He conducted a number of experiments on rats and pigeons that showed that through rewards and punishments (usually in the form of food), the behaviour of these creatures could be controlled and altered (see Figure 2.1). He suggested that this can be extended to language development and that the language a child produces can be controlled by the effect it has on the speakers around it. So, a child will respond to the stimuli around him or her and imitate this language. When a child is given praise and encouragement for his or her language use (for example when a first word is uttered), then the child will come to associate talking with **positive reinforcement**. It is therefore sensible to expect the child to continue to try to use this language in order to receive more positive reinforcement. Positive reinforcement might take the form of 'well done, it is a dolly!' or 'aren't you clever, using such a long word?'. **Negative reinforcement** operates on a slightly different principle, whereby a child's language use becomes conditioned in a particular way by knowing that particular language characteristics might trigger a negative response. For example, if a caregiver gets cross when a child does not speak using Standard English or forgets to say 'please', it is likely that the child will remember to use such language forms in future utterances.

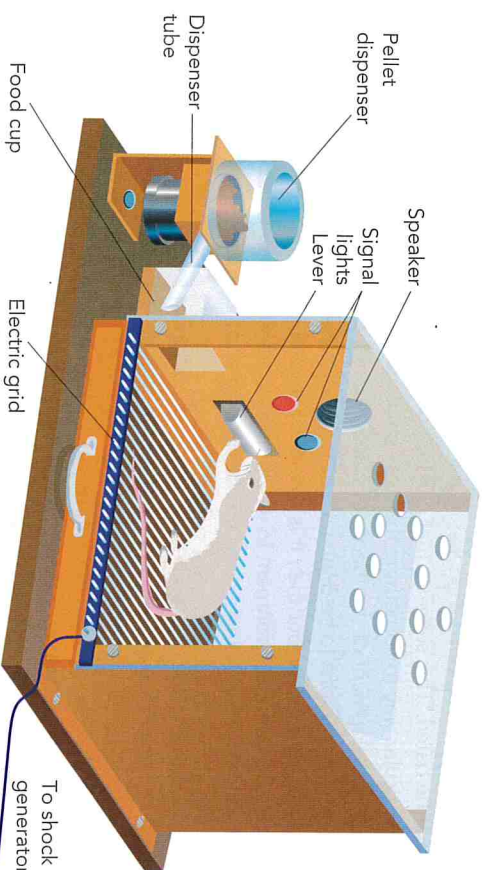
KEY TERMS

Operant conditioning: the idea that either a positive or a negative response given by a caregiver can influence the way in which a child talks on future occasions

Positive reinforcement: the idea that either a positive or a negative response given by a caregiver can influence the way in which a child talks on future occasions

Negative reinforcement: correction, negative feedback, or the lack of feedback, which might prevent a child from making the same error repeatedly

Figure 2.1: Skinner's box, the environment in which rats and pigeons were tested and from which theories about operant conditioning emerged



A key criticism levelled at Skinner's theory surrounding operant conditioning is the notion that the learner in any given situation is having a stimulus imposed without an acknowledgement of his or her part in the process in terms of mental capacity or will. More recent research into the brain and cognitive development (for example by Patricia Kuhl 2011) has suggested that cognitive development and capacity for language development have far more influence than acknowledged by Skinner.

The work of another psychologist, Albert Bandura (1989), is also worth consideration in relation to behaviourism. He developed his social learning theory in 1977 on the basis of a famous Bobo doll experiment. It was found that when children saw violent treatment of a doll prior to a period of play with the doll and other toys, they were far more likely to imitate this behaviour. Although these experiments are not without their critics, an interesting comparison might be made with language development and imitation theory, perhaps suggesting that the language (or social behaviour) to which a child is exposed is then more likely to be imitated by the child. Bandura explicitly made this connection in 1989, when emphasising the importance of language modelling to support the child's own cognitive development in his social cognitive theory. Ideas about the importance of modelling are also developed in the work of Jerome Bruner and Lev Vygotsky (see section 2.1.4).

2.1.2 Nativism

Noam Chomsky is the most well-known proponent of the **nativist theory**. He rejected Skinner's theories, particularly challenging the validity of experiments

on rats and pigeons to offer any conclusions about humans' capacity to learn language. He suggested that, as humans, our responses and development of language are more sophisticated than Skinner suggested, with a direct relationship between input (or stimulus) and output (the child's language influenced by the nature of reinforcement received). Chomsky (1965) suggested that every human has a 'Language Acquisition Device' (LAD), the innate or in-built system, whereby young children can make sense of the world around them (Figure 2.2).

Figure 2.2: The process of acquisition incorporating the LAD



Once this device has been activated, a child can more easily make sense of language it hears to then produce its own language. Further support for this theory is the belief that young children have a **poverty of the stimulus**: the language to which a child is exposed cannot possibly provide the sophistication of a whole language. This means that, in order to gain fluency, children must already possess a language processing capacity.

Chomsky also drew on the theory of a **universal grammar** to support the nativist approach. All languages have similar structures and roots and all children tend to acquire language at comparable rates and in similar ways. This might suggest that internal processes are at work. This can be reinforced by the fact that children often resist correction and can over-generalise grammatical rules, such as 'I eated it', when they would never have heard these forms used by a caregiver.

KEY TERMS

Nativist theory: a language learning theory that suggests an in-built capacity to acquire and make sense of language

Poverty of the stimulus: theory attributed to Chomsky that suggests the language to which a child is exposed is insufficient to support the development of language that occurs

Universal grammar: the notion that all human languages possess similar grammatical properties which the brain is 'hardwired' to be able to decode and use

A phenomenon observed in the 1980s is often cited in support of nativism (Senghas 1995). When deaf children in Nicaragua met together in schools

for the first time, they collaborated to create their own form of sign language (Nicaraguan Sign Language), suggesting an innate capacity to create a new language with quite sophisticated grammar systems.

2.1.3 Cognitive development and the connection to language acquisition

Jean Piaget is credited with identifying four stages of cognitive development (outlined in Table 2.1) and these are often called upon to provide a framework for how thinking develops and evolves. Although Piaget was not thinking explicitly about language development when analysing cognitive development, the connection between language and thought is arguably very close and when at a particular cognitive 'stage', there will be particular features of the language in use by the child. Indeed, the way in which we can gauge children's cognitive development is often based on the way in which they represent their understanding of the world around them through language.

Table 2.1: Four stages of cognitive development

Aged 0-2	<p>Sensori-motor stage of development</p> <p>Up to the age of two, the child will respond to the world through the senses and movement. During this stage, a child will develop an understanding of object permanence, an awareness that an object continues to exist even when it can no longer be seen. For example, when an older sibling goes to school, a child will, by the end of the sensori-motor stage of development, understand that the sibling continues to exist even when no longer in the room.</p>
Aged 2-7	<p>Pre-operational stage of development</p> <p>From the age of two, language becomes more fundamental to children as the principle way in which they represent and communicate with the world around them. Until the end of this stage, a child's speech and actions will often be more instinctive and fundamentally egocentric. This means that the world of the child will be of paramount importance and empathy with others may be less developed. This reinforces the research surrounding lexical development explored in chapter one that centres on the child's own life and key concerns.</p>

Aged 7-11	<p>Concrete operational stage of development</p> <p>This stage of cognitive development is when a child becomes capable of rational and logical thought and expression of this through language. This will not necessarily be transferred to abstract thinking though.</p>
Aged 11-16	<p>Formal operational stage of development</p> <p>Thinking by this point will be more abstract and children will be able to engage in debate around moral or ethical issues. This stage develops through to adulthood.</p>

KEY TERMS

Object permanence: an understanding that objects continue to exist even when they cannot be seen or touched

Egocentric: thinking only of oneself, without understanding or regard for the feelings of others

Although these four stages have been widely accepted since they were first proposed, there are issues with the research methods employed by Piaget. Subsequent research has also identified issues with the validity of the four stages.

At the time of conducting the research, Piaget used quite a narrow sample of participants, consisting of family and friends from similar socio-economic and ethnic groups. It becomes problematic to suggest that research arising from such a sample might be applied universally to all children. In addition, it has also been suggested that Piaget failed to recognise that a child's performance in test conditions might be very different from the actual capacity of that child in terms of their thinking. We have only to consider variability in examination performance due to external factors to understand that there may be a gap between a child's capacity and actual performance.

A question has been raised regarding the connection between language and cognition too. Linguists (including Wang and Bellugi, 1993) have investigated a rare chromosomal disorder which provides an interesting example of cognitive and linguistic development being quite separate. Williams Syndrome often manifests itself with highly developed linguistic capacity that can mask cognitive difficulties. Although this is a rare condition (one in 10,000 live births are affected by it), it raises important questions about whether we can accurately ascertain an individual's cognitive capacity through their language use.

Questions have also been raised about whether young people have more sophisticated thinking than acknowledged by Piaget. Betty Repacholi and

Alison Gopnik (1997) published research that contradicted Piaget's notion of egocentricity lasting until the age of seven. In an experiment involving food options, broccoli and crackers were offered. Infants involved in the research were aged 14 months and 18 months and preferred the crackers. When offering a snack to the researcher, the 14-month-old infant would offer the cracker as it was their preferred option, irrespective of whether the researcher expressed a preference for broccoli or crackers. By contrast, the 18-month-old child was able to identify when the researcher had indicated a preference for broccoli and then offered this instead. This suggests that from a very young age, children are sensitive to the needs and desires of others and are not entirely egocentric in their behaviour. This experiment serves to emphasise that perhaps it is a disservice to the complexity of a child's thinking to try to divide this development into 'stages' as Piaget did.

2.1.4 Social interaction and language acquisition

Both Jerome Bruner (1981) and Lev Vygotsky (1934) suggested that social interaction lies at the heart of language development: not just as a means of providing language to copy but to support and scaffold the language development of the child.

In the 1970s and 1980s, Jerome Bruner responded to Chomsky's LAD by humorously developing the acronym to Language Acquisition Support System (LASS), emphasising the critical importance of social interaction to language development. This moved beyond Skinner's operant conditioning that suggested the child's language could be moulded through reinforcement. Bruner drew attention to **scaffolding** to support development and the ritualised activities within a child's typical day. By re-visiting the same activities and learning opportunities, children can move from being passive participants to being active learners within a familiar context. It was suggested that language is the key connection between external events or factors and the internal processing of these for the child.

KEY TERM

Scaffolding: the support provided by caregivers through modelling how speech ought to take place, in order to help the child's language development

Lev Vygotsky, though working and writing in the early twentieth century, became increasingly popular in the 1980s with a similar approach to that suggested by Bruner. He suggested that in order for children to learn (including language), a **More Knowledgeable Other (MKO)** would need to be present. This MKO can move children beyond their **Zone of Proximal Development (ZPD)** (Figure 2.3), encouraging them to move from what they already know to what

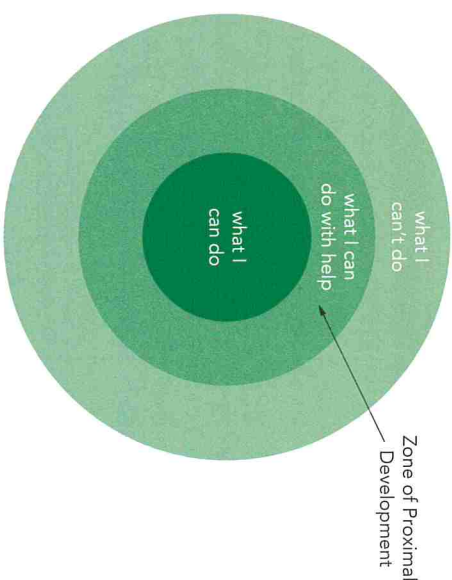
is not yet known by the means of scaffolding and support. The learner will then broaden the scope of their ZPD so that learning can continue to progress.

KEY TERMS

More Knowledgeable Other (MKO): the often older and always more knowledgeable participant in an interaction who might offer support to further the child's development or learning

Zone of Proximal Development (ZPD): the area between what a child can already do and that which is beyond their reach. It is the area into which a caregiver might enable the child to progress by offering the necessary support or scaffolding to facilitate learning

Figure 2.3: The Zone of Proximal Development for learners



2.1.5 Usage-based theory to language learning

Michael Tomasello has been a key figure in the development of a 'usage-based theory' to language learning. An essential principle in this theory is that a number of cognitive developments take place simultaneously with the emergence of language and are interconnected. Michael Tomasello (2003) proposes that in their early language development, children are bringing their intention-reading skills and pattern-finding capacities to their acquisition of language.

Intention reading develops as a child evaluates the context in which language is spoken and then comes to understand the meaning and intentions of those

around him or her from the language and gestures being used. An early skill to develop is the capacity to identify those words conveying most meaning within utterances. This skill can arguably then be seen in the child's own language production during the holophrastic stage of development when children understand and use single key words in any given situation to convey a large amount of meaning.

Pattern finding is something that children are also seeking to establish from birth and on reaching the two-word stage, the child can understand the effect of particular word pairings and patterns. For example, 'More' followed by a food noun will convey the meaning to a caregiver that the child wishes to eat more of said food and this may result in the child being given more of this food. The development of grammatical accuracy in a child's speech demonstrates this pattern-finding capacity.

2.2 Timeline of language development

Date	Key thinker	Key ideas
1902	Ivan Pavlov	Dogs' physical responses and behaviour were altered according to external stimulus and contextual factors. This led to the theory of classical conditioning.
1913	John B. Watson	Classical conditioning was linked to speech to suggest the pattern of stimulus and response. This led to the proposal that speech was determined by external factors.
1934	Lev Vygotsky	<i>Thought and Language</i> (1934) introduced the concept of a Zone of Proximal Development. Although he was writing in the 1930s, Vygotsky's writing only really gained influence in the 1980s.
1936	Jean Piaget	The theory around four stages of cognitive development have been attributed to Piaget and was developed in his book <i>Origins of Intelligence in the Child</i> .

Date	Key thinker	Key ideas
1957	B.F. Skinner	Operant conditioning was extended to language, thinking about positive and negative reinforcement as ways in which speech was developed. Behaviourism was born through Skinner's text <i>Verbal Behavior</i> .
1965	Noam Chomsky	Chomsky suggested nativism, an inbuilt 'language acquisition device' by which the brain can make sense of the grammatical rules to which it is exposed.
1967	Eric Lenneberg	<i>The Biological Foundations of Language</i> explored the patterns of language development, since children will develop language at very similar rates, and from this came the notion of a critical period, during which time language needs to develop.
1972	Catherine Snow	In the paper entitled 'Mother's Speech to Children Learning Language', Snow's research focused on the ways in which mothers talk to their children and the connection to the child's age. From this, the notion of child-directed speech was developed.
1972–1980	Jerome Bruner	Development of social interactionist theory, identifying the importance of caretaker input and the Language Acquisition Support System (LASS). A summary of these developments was published in 'The Social Context of Language Acquisition' (1981)
1975	Michael Halliday	<i>Learning How to Mean: Explorations in the Development of Language</i> outlines the identification of functions of language.

Date	Key thinker	Key ideas
2003	Michael Tomasello	In <i>Constructing a Language: Usage-Based Theory of Language Acquisition</i> , Tomasello proposes a focus on the inter-connectedness of language development with intention reading and pattern finding (that is to say, other spheres of cognitive development).

2.3 The influence of environmental factors

There are obvious ethical difficulties in finding out what happens when a child does not experience a language-rich environment in the early years. A researcher would not be given ethical clearance to conduct a potentially damaging experiment that could hamper a child's language development. There are a number of well-documented cases available to us that are not from research but real-life examples from untypical and often quite difficult childhoods when language has been largely absent.

Outcomes in the following cases are variable and could be seen as evidence of the importance of linguistic input from a young age. Lenneberg (1967) suggested the existence of a critical period during which a child must learn language. This critical period was seen to be a child's first few years, with acquisition then becoming steadily more difficult between the age of about five and the start of puberty.

2.3.1 The Wild Boy of Aveyron

In 1800, a child was discovered who had been feral for a number of years, living in forests in southern France. He appeared to be deaf and mute, was thought to be about 12 years old and survived mainly on potatoes and nuts. He became a popular focus for study, particularly since philosophers of the day, such as Jean Jacques Rousseau, were trying to establish what it actually meant to be human. The child, who became known as Victor, was supported by the doctor, Jean Marc Gaspard Itard, who worked with him for five years. By the end of the programme, the child could write short messages onto a chalk board. He never really spoke and there was a feeling that the critical period when speech could develop had passed. It seems that the progress being made by this child plateaued at a fairly simple level. It was thought at the time that, by failing to talk, the child remained less than fully human as he continued to behave more

like a wild animal. There has been modern-day speculation about whether this child was autistic, since he appeared to be deaf but was not.

2.3.2 Isabelle

A reasonably positive outcome emerged from a similar situation in 1932 with the case of Isabelle. This child was born illegitimately to a mother who was deaf-mute and who was the only person to whom Isabelle was exposed from birth until the age of six. Her mother had been confined in the family home but then escaped, which enabled Isabelle to experience a more language rich environment.

Following intervention and support, Isabelle acquired an extensive vocabulary of thousands of words by the age of eight and her non-verbal noises had been replaced with rapid language development. It could be argued that at six, the child was still within the critical period when development can successfully take place. It has been suggested that brain plasticity becomes significantly reduced by puberty which means that language learning prior to this is more rapid and successful. This is often an argument cited for the teaching of second languages to children in their first few years in school, rather than waiting until they are older. It might also explain the ease with which bilingual children are able to develop their language, since they are surrounded by two languages from birth.

2.3.3 Genie

In 1970, an American child, who became known as Genie, was released from years of captivity after suffering neglect and abuse from her father. She had been kept tied up and isolated during her formative years. From the age of 20 months until she was over 13 years old, Genie had been beaten whenever she made a noise and the exposure she had to language was minimal and is documented as confined to grunts. When she was finally released and became a ward of the state, she had about 20 words in total and these included 'stoptit' and 'nomore'. Despite extensive support to enable her language development, Genie never moved beyond the speech of a two- or three-year-old and did not master the rules of grammar. She also regressed in her language use at times when she was moved between different foster homes.

RESEARCH QUESTION

'Feral' children

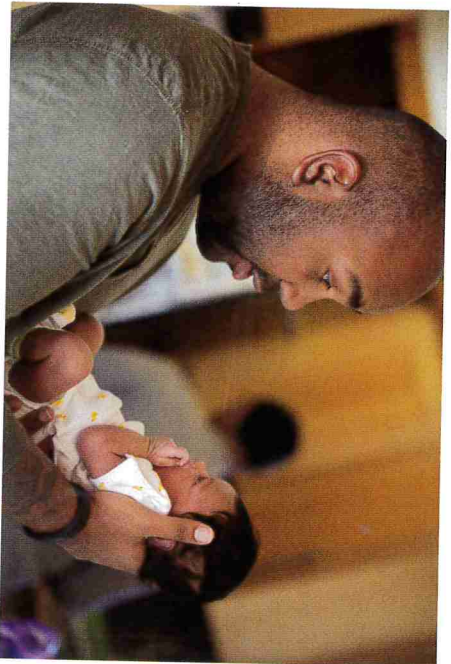
Investigate Victor, Isabelle or Genie in more detail. Alternatively, you might wish to research another well-documented 'feral' child who adds to the debate about language development and the importance

of environmental factors (you might choose from Oxano Malaya, Prava, Kamala and Amala or 'Peter the Wild Boy').

- What do you now know about this particular individual?
- How has studying this individual added to your understanding of issues surrounding language development?
- Evaluate the importance of studying feral children and their language use in the context of child language development.

2.4 Child-directed speech and its characteristics

Figure 2.4: Interaction between caregiver and child is critically important to language development



As suggested in section 2.1, caregiver input, scaffolding and support in language development are important and this caregiver input has been called many things including motherese, baby talk and most recently **child-directed speech**.

KEY TERM

Child-directed speech: the particular variation of language used by a caregiver when interacting with young children

Gregory Bryant and H. Clark Barrett (2007) undertook research that suggested intentions can be recognised in child-directed speech, regardless of whether the meaning is actually understood. For example, Shuar adults (South American hunter-horticulturalists) were able to successfully differentiate between child-directed and adult-directed speech even if the language being used was unknown so the words themselves were not understood. They could sense whether the utterance was intended to prohibit, approve, comfort or provide attention. This research is significant as it suggests that meaning is clear from intonation and the way in which utterances are spoken, rather than through the semantics of the actual words.

So, how do caregivers interact with children? Research into the language of the caregiver became significant in the 1970s and recognised a number of features in child-directed speech. Catherine Snow (1972) investigated 'mothers' speech' to their children of varying ages and drew conclusions about language used to speak to two-year-olds being simpler than that used to ten-year-olds. This seems straightforward, but what was also significant was the recognition that not only is simpler language easier for the child to comprehend but it also facilitates a child's language development.

Child-directed speech is comprised of the following characteristics:

- Higher pitch and exaggerated intonation
- Repeated grammatical structures
- Repetition of the child's name
- Use of many questions and commands
- Use of concrete nouns
- Fewer verbs, adjectives and function words
- Shorter overall mean length of utterance
- Use of recasts – the child's utterance is reconstructed to make it more accurate or developed.

ACTIVITY 2.2

Interactions with children of different ages

Read Texts 2A, 2B and 2C, transcripts which show interactions between a mother (M) and each of her three children, Tim (T), Emily (E) and Lisa (L). They are all playing with presents they have received from relatives.

Identify the features of child-directed speech (and the nature of the child's speech) that are evident and think about what conclusions you might draw about the age of each child based on the conversations that take place.

Text 2A

- M: so what are you doing Tim
- T: I'm making my lego y-wing and I'm checking through to see if there's any bits I haven't got
- M: is that the y-wing there
- T: yes, that's the part I'm not using
- M: and how long do you think this is all going to take you
- T: about an hour

Text 2B

- M: Emily what are you doing
- E: my tumble
- M: Mr Tumble (Mr Tumble Mr Tuuumbble) can we make a face (2) can we do it (1) put the body in
- E: doing it
- M: where are his legs (3) find him some legs (2) there's a head (1) shall we put those legs in (1) yeah

Text 2C

- M: Lisa how are you getting on
- L: great
- M: what are you doing
- L: I'm painting my furry
- M: your what
- L: my fairy

2.4.1 Child-directed speech and gender

It has often been argued that female caregivers are more likely to use supportive language and melodic intonation in their talk to children, whereas male caregivers are often seen as presenting a more challenging form of language to the child. The term 'fatherese' has often been used to distinguish the language used by male caregivers from that used by female caregivers. Mark Vandam (2015) suggested that male talk to children is more likely to resemble that used to other adults and is less likely to have the sing song intonation and simplification that is perhaps more attributable to the female caregiver. Connections have also been made between the context of the domestic setting and the use of child-directed speech but this would seem to suggest a traditional but not necessarily typical representation of the domestic roles.

PRACTICE QUESTION

The characteristics of early language development

Use Text 2D below to evaluate some of the characteristics of early language development and evaluate the impact and importance of adult input in supporting a child's development of language.

Emma (3 years, 1 month) is at home in a relaxed environment with her mother and a family friend. She has been having a tea party with her dolls and teddy bears, and then puts them all to sleep on the sofas. Emma's mother (H) and friend (R) are encouraging Emma to explain what is going on in her imaginative play. Emma has a doll that makes crying noises.

Text 2D

- H: why's she crying
(*(baby starts crying)*)
- E: that means she li - really wants her dummy (*(crying gets louder)*) (2)
oh she is crying
- R: uh oh uh oh give her a cuddle
- H: what's wrong with her
- E: she really is ill
- R: I think she might be tired
- H: are you going to put her to bed

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- E: yes (2) tired also ill
R: what's wrong with her
E: because she (2) a long time ago she had a cold she she
H: she was actually sick in this room wasn't she (1) one day she was very sick
E: yes
R: oh dear
E: and I cleaned it all up
H: she's often ill isn't she Em (1) that baby
R: does she get ill when you get ill
E: yes (1) sometimes I get ill
H: and she goes to nursery and sometimes she's ill at nursery isn't she
E: yes
R: does she go to nursery with you
E: no because I go to work
R: oh you go to work (3) what do you do
E: I'm the baby's mummy
H: what's your job Em
E: I think I dance
H: and sometimes is the baby naughty at nursery
E: yes
H: what naughty things does she do
E: she just hits her friends
H: she does doesn't she (2) and what did she do with her food one day at nursery
E: she just putted it on her whole h ((gestures her head))
H: she did ((laughing))

Theories of spoken language development

Wider reading

You can find out about the topics in this chapter by reading the following:

- Crystal, D. (1986) *Listen to Your Child: A Parent's Guide to Children's Language*. London: Penguin.
- Gopnik, A., Meltzoff, A.N. and Kuhl, P.K. (1999) *The Scientist in the Crib: What Early Learning Tells Us About the Mind*. New York: Harper Collins.
- Pinker, S. (2015) *The Language Instinct: How the Mind Creates Language*. London: Penguin.
- Pond, L. (2014) *How Children Learn: Educational Theories and Approaches – from Comenius the Father of Modern Education to giants such as Piaget, Vygotsky and Malaguzzi*. London: Practical Pre-School Books.
- Rymer, R. (1994) *Genie: A Scientific Tragedy*. New York: Harper Perennial.
- Saxon, M. (2010) *Child Language: Acquisition and Development*. London: Sage.