Linguistics

3.1 **Read the text and then answer the questions.**

Signs of success

Deaf people are making a profound contribution to the study of language

Just as biologists rarely see a new species arise, **linguists** rarely get to discover an unknown **dialect** or even better, to see a new language being born. But the past few decades have seen an exception. Academics have been able to follow the formation of a new language in Nicaragua. The catch is that it is not a spoken language but, rather, a sign language which arose **spontaneously** in deaf children.

The thing that makes language different from other **means** of communication is that it is made of units that can be combined in different ways to create different **meanings**. In a spoken language these units are words; in a sign language these units are **gestures**. Ann Senghas, of Columbia University, in New York, is one of the linguists who have been studying the way these have gradually **evolved** in Nicaraguan Sign Language (NSL).

The language **emerged** in the late 1970s, at a new school for deaf children. Initially, the children were instructed by teachers who could hear. No one taught them how to sign; they simply worked it out for themselves. By conducting experiments on people who attended the school at various points in its history, Dr Senghas has shown how NSL has become more **sophisticated** over time. For example, **concepts** that an older signer uses a single sign for, such as rolling and falling, have been unpacked into separate signs by youngsters. Early users, too, did not develop a way of **distinguishing** left from right. Dr Senghas showed this by asking signers of different ages to **converse** about a set of photographs that each could see. One signer had to pick a photograph and **describe** it. The other had to guess which photograph he was **referring** to.

When all the photographs contained the same elements, merely arranged differently, older people, who had learned the early form of the language, could neither signal which photo they meant, nor understand the signals of their younger partners. Nor could their younger partners teach them the signs that indicate left and right. The older people clearly understood the concept of left and right, they just could not **express** it. What intrigues the linguists is that, for a sign language to emerge spontaneously, deaf children must have some **inherent** tendency to link gestures to meaning.

3.2 **Say whether the following statements are true or false. Give an explanation for each answer using words from the text. Then use your dictionary to check the meaning of any words in bold that you do not know.**

1 Ann Senghas studies languages.
True - she's a linguist.

2 Teachers taught the Nicaraguan deaf children how to use sign language.
.....

3 The earliest form of the sign language was very basic.
.....

4 The older signers were able to show the difference between left and right.
.....

5 Linguists believe that deaf children are born with the ability to link gestures to meaning.
.....

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4.2 6b **Look at these answers to the questions in 4.1 and complete them with a suitable word from this unit. Listen to the recording to check your answers.**

1 Well, you need to be able to put down your textbooks from time to time and forget about (1)..... . That's the only way to become more (2).....in a language. You also need to (3)..... to (4)..... speakers of the language as much as you can.

2 I think the best language teachers are those who can (5)..... another language themselves. They also need to be able to (6)..... things clearly and in a way that is easy to (7)..... .

3 My (8)..... language is very difficult to learn because of the (9)..... . The individual sounds are very strange to other nationalities and difficult for them to (10)..... .

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Academic Reading

First words

There are over 6, 000 different languages today, but how did language evolve in the first place?

Pinpointing the origin of language might seem like idle speculation, because sound does not fossilise. However, music, chit-chat and even humour may have been driving forces in the evolution of language, and gossip possibly freed our ancestors from sitting around wondering what to say next.

There are over 6,000 different languages today, and the main language families are thought to have arisen as modern humans wandered about the globe in four great migrations beginning 100,000 years ago. But how did language evolve in the first place? Potential indicators of early language are written in our genetic code, behaviour and culture. The genetic evidence is a gene called FOXP2, in which mutations appear to be responsible for speech defects. FOXP2 in humans differs only slightly from the gene in chimpanzees, and may be about 200,000 years old, slightly older than the earliest modern humans. Such a recent origin for language seems at first rather silly. How could our speechless Homo sapiens ancestors colonise the ancient world, spreading from Africa to Asia, and perhaps making a short sea-crossing to Indonesia, without language? Well, language can have two meanings: the infinite variety of sentences that we string together, and the pointing and grunting communication that we share with other animals.

Marc Hauser (Harvard University) and colleagues argue that the study of animal behaviour and communication can teach us how the faculty of language in the narrow human sense evolved. Other animals don't come close to understanding our sophisticated thought processes. Nevertheless, the complexity of human expression may have started off as simple stages in animal 'thinking' or problem-solving. For example, number processing (how many lions are we up against?), navigation (time to fly south for the winter), or social relations (we need teamwork to build this shelter). In other words, we can potentially track language by looking at the behaviour of other animals.

William Noble and Iain Davidson (University of New England) look for the origin of language in early symbolic behaviour and the evolutionary selection in fine motor control. For example, throwing and making stone tools could have developed into simple gestures like pointing that eventually entailed a sense of self-awareness. They argue that language is a form of symbolic communication that has its roots in behavioural evolution. Even if archaic humans were physically capable of speech (a hyoid bone for supporting the larynx and tongue has been found in a Neanderthal skeleton), we cannot assume symbolic communication. They conclude that language is a feature of anatomically modern humans, and an essential precursor of the earliest symbolic pictures in rock art, ritual burial, major sea-crossings, structured shelters and hearths – all dating, they argue, to the last 100,000 years.

But the archaeological debate of when does not really help us with what was occurring in those first chats. Robin Dunbar (University of Liverpool) believes they were probably talking about each other – in other words, gossiping. He discovered a relationship between an animal's group size and its neocortex (the thinking part of the brain), and tried to reconstruct grooming times and group sizes for early humans based on overall size of fossil skulls. Dunbar argues that gossip provides the social glue permitting humans to live in cohesive groups up to the size of about 150, found in population studies among hunter-gatherers, personal networks and corporate organisations. Apes are reliant on grooming to stick together, and that basically constrains their social complexity to groups of 50. Gelada baboons stroke and groom each other for several hours per day. Dunbar thus concludes that, if humans had no speech faculty, we would need to devote 40 per cent of the day to physical grooming, just to meet our social needs.

Humans manage large social networks by 'verbal grooming' or gossiping – chatting with friends over coffee, for example. So the 'audience' can be much bigger than for grooming or one-on-one massage. Giselle Bastion, who recently completed her PhD at Flinders University, argues that gossip has acquired a bad name, being particularly associated with women and opposed by men who are defending their supposedly objective world. Yet it's no secret

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that men gossip too. We are all bent on keeping track of other people and maintaining alliances. But how did we graduate from grooming to gossip? Dunbar notes that just as grooming releases opiates that create a feeling of wellbeing in monkeys and apes, so do the smiles and laughter associated with human banter.

Dean Falk (Florida State University) suggests that, before the first smattering of language there was *motherese*, tha musical gurgling between a mother and her baby, along with a lot of eye contact and touching. Early human babies could not cling on to their mother as she walked on two feet, so *motherese* evolved to soothe and control infants. *Motherese* is a small social step up from the contact calls of primates, but at this stage grooming probably still did most of the bonding.

So when did archaic human groups get too big to groom each other? Dunbar suggests that nomadic expansion out of Africa, maybe 500,000 years ago, demanded larger group sizes and language sophistication to form the various alliances necessary for survival. Davidson and Noble, who reject Dunbar's gossip theory, suggest that ther was a significant increase in brain size from about 400,000 years ago, and this may correlate with increasing infant dependence. Still, it probably took a long time before a mother delivered humanity's maiden speech. Nevertheless once the words were out, and eventually put on paper, they acquired an existence of their own. Reading gossip magazines and newspapers today is essentially one-way communication with total strangers – a far cry from the roots of language.

Questions 1–5

Choose the correct answer **A**, **B**, **C** or **D**.

1 In paragraph 1, the writer uses the term 'idle speculation' to refer to the study of
- **A** why people began to use music.
- **B** where language first evolved.
- **C** when people began to talk.
- **D** how humour first began.

2 What does the writer tell us about FOXP2?
- **A** It helps prevent speech problems.
- **B** It is the same in chimpanzees as in humans.
- **C** It could have first occurred 100,000 years ago.
- **D** It could have first occurred 200,000 years ago.

3 In paragraph 2, what notion does the writer refer to as being 'rather silly'?
- **A** That language began such a long time ago.
- **B** That man could travel around the world unable to talk.
- **C** That chimpanzees may have been able to talk.
- **D** That communication between chimpanzees pre-dates man.

4 Why does the writer refer to 'lions' in paragraph 3?
- **A** To illustrate the type of communication needs faced by early man.
- **B** To indicate how vulnerable early man was to predators.
- **C** To provide evidence of other species existing at the same time.
- **D** To show the relationship between early humans and other animals.

5 Gelada baboons are mentioned in order to show that
- **A** using grooming to form social bonds limits the size of a social group.
- **B** early humans would probably have lived in groups of up to 50.
- **C** baboons' social groups are larger than those of early humans.
- **D** baboons spend 40 per cent of their time grooming each other.

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Questions 6–14

Look at the following statements (questions 6–14) below and the list of people.
Match each statement with the correct person or people, (A–E).
Write the correct letter, **A–E**, next to questions 6–14.
NB You may use any letter more than once.

6 There is physical evidence of increased human intelligence up to 400,000 years ago. .....

7 In the modern world, gossiping is seen in a negative way. .....

8 Language must have developed before art and travel. .....

9 The development of human language can be gauged by studying other species. .....

10 Gossiping makes humans feel good. .....

11 The actions of early humans could have evolved into a form of communication. .....

12 The first language emerged through a parent talking to an infant. .....

13 Gossip was the first purpose of human communication. .....

14 Early humans used language to help them live together. .....

List of people

A Hauser
B Noble and Davidson
C Dunbar
D Bastion
E Falk

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