Baby talk and pets

We tend to regard baby talk and the sort of language we use to address or cajole our domestic pets as something we keep strictly to ourselves and do not allow outsiders to hear it or participate in it. However, researchers from Sydney, writing in *Science* for 24 May, report their finding that there is far more to such small talk than we imagine.

When talking to babies, the researchers state, adults invariably use a special speech register that is characterised by raised pitch, exaggerated intonation and high affect, that is to say emotional content. Also, mothers hyperarticulate their vowels when talking to their infants, but not in addressing adults.

The phenomenon appears to happen everywhere, whether the language is English, Russian, Swedish or Japanese. The reason, it is thought, is to help the infant's linguistic development by amplifying phonetic characteristics of vowels. Baby talk is elicited automatically, and not deliberately chosen. A similar situation arises when we talk to pets, and suggests that, unconsciously, we are trying to encourage them to speak or understand our language.

To study this problem, objective comparisons were made of the speech of 12 mothers to their infant, their pet and another adult. The three aspects measured were pitch, intonation and rhythm (affect), and hyperarticulation of vowels. All subjects were monolingual native speakers of Australian English. The results indicated that speech directed to six-month infants, cats or dogs differed distinctly from that to other adults in terms of heightened pitch and affect. However, exaggerated vowels were used for infants but not for pets.

It is concluded that speakers intuitively respond to the perceived emotional and linguistic needs of their audience, and adjust the relative components of their language accordingly. It would be interesting to discover whether the same sort of analysis might be applied to the speech of adults addressing their peers in assemblies or lecture theatres.

Galvanic touch

A correspondent who noted my recent piece on mercury (*PJ*, 25 May, p738) has recounted a strange experience that arose in his grammar school days. He was subjected to dental treatment and the local authority dentist gave him a copper cavity filling in place of the usual mercury amalgam stopping.

Subsequently he was given a mercury amalgam filling in apposition to the earlier copper one. When saliva came into contact with these two metals the effect of a galvanic battery resulted, producing intermittent twinges of toothache. Then the copper filling was replaced with a mercury one, the condition was relieved.

I wonder whether anyone else has experienced a similar situation. It is alarming to note that repairs of many kinds, including those of domestic equipment and vehicles, are sometimes carried out without due regard to what may happen if an electrolyte solution is brought into contact with incompatible metals. In the long run, structures may well collapse.

Big ideas

The Iraqi authorities are making a determined effort to recover some of the prestige once enjoyed by their country in the field of archaeological research, according to a report published in *Science* for 3 May. Their endeavour is viewed as a belated attempt to restore the international links that have for many years been severed by the mistrust between Saddam Hussein and his ministers and other governments. On the other hand, there are cynics who maintain that the scheme is intended to displace world attention from other activities.

The Iraqis plan to set up a Saddam Institute in Mosul as a research centre, library and museum where scholars from all over the world can examine the 70,000 known cuneiform tablets and perhaps an equal number of hitherto undiscovered tablets that cover the history and development of Mesopotamia. Mosul University is due to hold an international conference this autumn to launch the project.

Casts of clay tablets from the Assurbanipal collections in European institutions are keenly sought by Iraq to fill out the national collection, although it is understood elsewhere that most of the texts are already recorded and edited by archaeologists. Apart from a floor in the projected building dedicated to publications on ancient Mesopotamia there will be computer terminals with access to appropriate databases, and five houses to accommodate visiting scholars.

Inevitably, many observers are doubtful whether Iraq will be prepared or able to fund so grandiose a project while it remains unable to feed or educate its own citizens. Some suspect that it is a smoke-screen, like many such devised by devious politicians all over the world to divert attention from more suspicious and underhand activities, for which Saddam is notorious. Megalomaniacs do have remarkably bright ideas, but most of them, we know, are useless and wasteful at the best, and in the long run socially harmful.

Cups that cheer

Tea as a beverage has an ancient reputation as a gentle and refreshing stimulant. Whether it originated in China or India remains a subject for dispute, but it was extensively consumed in China from the fifth century, its use spreading via Tibet and Mongolia into Europe, where it was adopted towards the end of the 16th century. In 1636 it was drunk in Paris, and in 1646 Charles II was presented with two pounds of it by the East India Company. European doctors hailed tea as "a medium for ensuring health and long life".

Tea was not invariably beneficial, however, particularly if taken to excess. In America, where professional tea-tasters drank 200 or so cups a day, jaundice, headache, hypochondria, memory loss, visual disturbances and liver atrophy were encountered, and some individuals who formed the habit of chewing tea-leaves experienced delirium. Smoking tea in cigarettes also resulted in ill-health.

A report from Vienna, published in *The Lancet* for 27 April, reinforces the message that habituation to large quantities of tea may have strange adverse consequences. A man aged 44 was suffering from muscle cramps. He admitted having drunk up to four litres of black tea daily for 25 years. When he began to experience gastric distress he changed his tea to Earl Grey and continued as before. After a week he noted repeated muscle cramps in his right foot, growing more intense and spreading to the left foot, hands and right calf. He experienced limb paraesthesias and blurred vision, with a sense of pressure in the eyes. Determinations of serum and urinary ions were normal. After five months he reverted to black tea, whereupon his symptoms faded, provided he limited his recourse to Earl Grey to one litre daily.

Earl Grey tea comprises black tea treated with bergamot oil, which contains psoralens, bergapten in particular, with a dimethoxycoumarin. Its effect on this man was attributed to the reduction by bergapten of potassium permeability at the nodes of Ranvier, leading to the disturbances of sensation.