one recently discovered carnivorous dinosaur nest site that contained broken egg shells and numerous very small bones from herbivorous dinosaurs. As the site appears undisturbed, Mikhailov concludes that it provides clear evidence that "small animals were brought in by adult predators to feed the babies."

As scientists come to view the dinosaur as a caring creature they are also reconsidering the old dogma that the dinosaurs were cold blooded. Few, however, have gone so far as to embrace the view that dinosaurs were warm blooded. At the BA, a debate on this normally divisive issue ended with a consensus that dinosaurs must have had very high metabolic rates when young (elegantly charted by Horner with comparative studies of the rapidly growing bones of young dinosaurs) and switched to slower rates as they grew large. If they did not, said Horner, they would have risked a "melt down" as heat from muscles and digesting food built up in their vast bulk.

It was thus agreed that dinosaurs were neither hot-blooded nor cold-blooded but "somewhere in the middle"—a very British compromise for a debate that closed the final day of a very British meeting.

Video-Tunneling to School

"These students," says Professor Tim O'Shea, displaying a video of his educational technology laboratory at the Open University, "are working in a space that doesn't exist in the real world." He may sound like another virtual reality freak, but O'Shea is actually trying to be practical: With 200,000 students and 10% of Britain's bachelor degrees to its credit, the Open University—the world's most advanced institute for learning-at-a-distance—constantly needs new ways to make students in their living rooms feel as if they're in class.

When the Open University was set up 20 years ago, its teachers could assume only that students had a black-and-white television to see the instructional programs broadcast from the university. Now, says O'Shea, 16,000 students use home computers and electronic mail as a part of their studies and the search is on for more sophisticated modes of interaction.

On show at the BA meeting was a system that creates a new kind of space in which students can simultaneously work face-to face and side-by-side. Although still at the experimental stage, telecommunication lines have already enabled tests in which users 600 miles apart were brought into the same "virtual world."

Face-to-face interaction is simple enough: It comes through an audio link and a "video tunnel," a pair of television screens and cameras arranged for intimate communication. Beam splitters line up the axes of each camera and screen pair so that if you look into the eyes of the person on screen, that person will be looking straight back into your eyes.

Side-by-side interaction at a distance is a little more complex. Alongside each person's video screen is a conventional computer allowing access to a shared workspace—a "boundless two-dimensional plane." All that means is that people at each end of the telecommunications link can scroll over the same plane in any direction and use any area of it to make notes, or run calculations, or do anything else the computer can do. If the two people scroll to the same area of the plane they will see the same view and can work together (just as though they have physically moved to the same part of a large table), if they scroll to different areas they can work apart (as though they have moved to opposite ends of a table). In addition, a "radar" at the top of the screen provides a set of smaller images of the more distant parts of the plane—a quick glance there is like a quick glance to see what your colleague is up to at the end of the table.

The end result, of course, should be to make the users feel they have all the benefits of working side-by-side in the same room while also having immediate face-to-face eye contact—a combination that is impossible in the real world.

The hard bit, says O'Shea, was not designing the system, but the hours and hours of analysis needed to see how people behaved when combining side-by-side with face-to-face interaction. The general verdict is that something like this is coming, with screens that allow groups of students and teachers to work together while talking on multiple video tunnels. As the only nation with sufficient backing to drive such educational innovation (individual U.S. states that have planned Open University-style projects have given up because of lack of central funding, says O'Shea), the future may—for once—arrive first in Britain. ■ ALUN ANDERSON

UK Diabetics Plan Insulin Suit

London—In a move that will be closely watched by the pharmaceutical industry, British diabetics are preparing to sue suppliers of the genetically engineered "human" insulin that keeps them alive. Ironically, however, just as 31 lawyers, representing more than 500 diabetics, met here last week to coordinate their multimillion-pound claims, a new clinical study that casts doubt on the scientific basis of the diabetics' complaints was published in *The Lancet*.

The diabetics say they have suffered severe side effects since switching from cattle or pig insulin to the laboratory-made human version, which became available in England in the mid-1980s. Most worrying, they say, is that they no longer feel the bodily signals that warn of hypoglycemia (low blood sugar) that can lead to unconsciousness and coma. Insensitivity to signs of low blood sugar has resulted in more episodes of unconsciousness, the diabetics allege. They also complain of headaches, confusion, poor concentration, anxiety, and fear, and many have subsequently switched back to animal insulin as a result.

Medical evidence, however, is mixed. Some studies find that one-third of all patients who switched to human insulin were adversely affected. But others, including a study presented in this week's *Lancet*, find no difference among the various insulins. The *Lancet* study, by Alan Patrick and his colleagues in the Liverpool area, looked at seven patients who had returned happily to pig insulin after complaining of negative experiences with human insulin. But in a blind hospital trial to compare their responses to human and pig insulin, the patients' physical and psychological reactions were identical.

Gareth Williams, a consultant at the Royal Liverpool Hospital and member of the *Lancet* study team, nevertheless separates their medical research from patients' needs. "Scientifically," he said, "we believe there is no difference in the response." But, he added, diabetics may in fact feel better taking porcine insulin, and "there is no reason for patients to be made anxious while doctors are squabbling over this."

The two companies that make human insulin, Eli Lilly and Novo Nordisk, assert that there is no evidence that human insulin is unsafe. Lilly has concluded, from it's own and others' investigations, that "there is no significant difference in the frequency or severity of hypoglycemia, or in the awareness of symptoms experienced by individuals being treated with either human or animal insulin." Neither company will comment on the possible lawsuits. ■ JEREMY CHERFAS