



Demonstration drawing produced by a Calcomp 960 Plotter,
to show speed and versatility, 1981.

Editorial

A horseless carriage for the mind

We sometimes feel entitled, these days, to think that we have heard enough about micro-computers. Their development has been in the mass-salesmanship phase, so familiar to our age, for nearly two years now. Each marketable drop of this immense wave of the future is breaking over us clad in language calculated, with the greatest sophistication that the advertising fraternity can muster, to appear casual. Yet behind that wave and its unnatural brightness come the initiates of the computer, speaking a language we do not understand. We had better. The language of these initiates is present to some extent in certain articles in this issue.

This is not to refer to the so-called "computer languages" which translate from one to the other, layer by layer, right down to the "machine language" engineered for each magic box of chips and wiring to understand and obey. At the top of these layers lies of course the speech we now use among ourselves; those of us who wish to use a computer must simply learn to code our thoughts, simplifying and rationalising them a good bit - much as one does in speaking intelligently to young children - in order to "converse" with the machine.

The word "converse" here has been put in quotation marks, because the other person with whom we shall exchange thoughts through the medium of the machine - having entered in advance his or her part in the exchange - is for all purposes of that "conversation" dead. Like the author of a book once it is printed, a programmer cannot then express any further thoughts in a given program. There can be no "conversation" in the real sense, with its potential for swift and subtle intimacies and for shared spontaneities, with a pre-ordained tape that responds through the cold glow of a screen to the clicking of a keyboard.

Rigorous though their discipline may be, these codes are not difficult to learn, though they will never be as satisfying as our present language. Nor will that version of English be so

satisfying that the initiates of computing use among themselves, like the language of cars; though as owner-drivers of machines we could doubtless learn that kind of speech also, given time. It is full of unfamiliar words, of familiar words used in unfamiliar sense, and of ellipses and other syntactical short cuts, and moreover the habits of mind that are acquired in computing do not seem at all comfortable with the styles of continuity in our present language. Major barriers to fluency seem to lie deeper than the mere surface of linguistics, disturbing the way that concepts customarily relate to each other.

But we feel we are not being given time. We seem to be being compelled by events - and not just by salesmen - to adopt new concepts and to abandon old ones, without having adjusted them to each other, in a way that has no precedent. It is as if we were being rushed from the age of horses into the age of cars within a couple of years, instead of having the better part of a century in which to alter the habits of our whole economy, of our personal lives, and of our society.

There is some instruction for us in that analogy. What the internal combustion engine has done to people who once had to care for horses in order to get about, the computer is likely to do for us who care for speech as a means of getting about in our minds. The enormous scale of change that automobiles have brought about we are hardly aware of, though a strong-minded Victorian visiting us from his native 19th Century would certainly have a breakdown before the week was out. We may think we know about the physical changes that have occurred: to towns and countrysides, from roads and traffic and from consequent accelerations in building and in land use; great shrinkages of distances, disappearance of rural life, disbandment of families, the near frantic pace and complexity of modern everyday activities. Do we fully realise our present extravagances, however, consuming the goods that travel so swiftly, dexterously, and endlessly on those roads; and our astonishing abandonment of those former virtues of thrift, of pride in maintenance and good repair, and of care in use?

Compared to those who could once afford horses, or who had to use their feet to get about, we travel by roads nowadays in a state of some tension, out of touch with other people and with the land, and no longer with any concern for the animal welfare of ourselves or our horses. Our families are scattered, our young are independent of us, a sexual revolution with which cars have had a good deal to do has altered everybody's routines of affection. It took the passage of forty years after the advent of mass availability of automobiles in North America before we became aware of a huge general loss of physical fitness - a loss which has only partially been restored since then, for some, by such palliatives as jogging and bicycling.

Over such a time span as almost a century it has been hard to grasp what the effects of that change have been on our habits of thinking and feeling, for it has matched the life span

of the oldest among us; we have all grown with the change. but any corresponding changes to come will have happened to us before we are ten years older. The means of traffic for computers already exists, in telephonic and other circuitry; it took over fifty years to develop the road systems that cars and trucks now depend on.

All these changes have certainly shown up in our language, that ultimate register. Not only in words, as in "accelerate", getting one's mind "in gear", "running out of gas", and having someone "parked" on your doorstep, all of which would have been incomprehensible to our visiting Victorian; but also in the interrelations of the concepts behind them that are revealed in our discourse. Many new images and concepts are already upon us, to be acquired in our immediate future, along with huge corresponding changes in economics and social habits. There will be wrenching and anxious times; no doubt the extraordinary convenience of the new ingenuities will carry us all madly along.

We wonder, though, as they used to wonder about the horseless carriages, whether the human frame and mind will tolerate such a pace. The shortness of time for adapting to it all is a totally new factor. That factor alone may justify certain fears, of breakdown for ourselves, and for our children of a general loss both of mental tone, through the ceaseless fragmenting of mentation that is the style of these machines, and of such values as a care for the quality of information. In the story of human life, losses do tend to accompany gains.

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