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Computers in Perspective, before Ninth Annual Computer Conference, Waldorf-Astori,a New York, N. Y. May 21, 1973

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COMPUTERS IN PERSPECTIVE

by

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before

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As you know, this is the ninth computer conference sponsored by the American Institute. And over the years the trend of attendance has been upward. The first of these events was attended, I believe, by some 70 to 80 people. Today there are more than 250 people here. It's gratifying to take part in a meeting where such a degree of interest is evidenced in its subject, and I'm grateful to Arnold Schneidman for inviting me.

I have participated in one of these conferences before -- at Kansas City several years ago. At that time I was a member of the ethics committee of the Institute, and I spoke on the application of the Code of Professional Ethics to various computer functions. Today I'm billed to deliver what the conference program lists as a "Keynote Address" -- which suggests that I should address myself to something broader than that earlier subject.

The conventional thing to do, I suppose, might be to speak about the ever-widening deployment of computers in the modern world and about new ideas for their use in the field of accountancy. But the very fact of your presence at this meeting shows that all of you are well aware of the impact of computers on today's society and

that you need no words from me on that score. Also,
the various facets of computer applications to accounting
will be treated amply and expertly in the remainder of
your two-and-a-half day program, so there's no point in
my addressing myself to that subject.

It's my intention, therefore, not to talk
about the momentous importance of computers but rather
to try to view them in perspective -- a perspective not
with relation to society generally but with relation to
the accounting profession.

Let me begin by observing that the kind of
jokes people make about one thing or another is often
very revealing of their feelings and attitudes toward
that thing, whatever it may be.

Now an audience such as this is probably
familiar with every joke about computers that has ever
been told, and the quip I'm about to offer is not meant
to entertain you by its novelty but simply to illustrate
a point.

It has been observed that some computers have
been programed to reproduce themselves but they don't
derive any enjoyment from the process.

This rather wry comment -- and dozens of others
on the subject -- depend for their humor on attributing

human qualities to machines, and then giving an abrupt twist to the situation that is pictured.

Another common feature of the stories is that they treat the computer with a certain awe. It is almost as though the jokes had arisen as a vent for anxiety -- like people attempting witticisms when trapped in a stalled elevator.

And it is this sense of awe, I think -- this more or less subconscious feeling that because the computer can calculate at superhuman speeds it may be superhuman in other respects also -- that sometimes hinders our seeing the computer in perspective.

We all know that the computer is a tool, a marvelous servant if you will. We should avoid regarding it as one of those servants who are portrayed in films and plays as so flawless, imperturbable and all-knowing as to make their employers and everyone else uneasy.

I say this because I suspect most CPAs have been made uneasy by the computer. Unnecessarily so. Having practiced and served their clients well over a long period, they are being given to believe that their lease on professional life will be short unless they become deeply versed in a knowledge which is vast, esoteric and complex.

The CPA has been advised (and I quote) --
"The implications /of the Computer Revolution/ are
awesome. There are economic, political, social and
moral problems involved . . . Its impact on the accounting
profession in particular will be heavy . . ."

And the author of those words then goes on
to quote another author: "It will become essential
that the accountant have as complete a working knowledge
of EDP as he now has of the fundamentals of tax laws. . .
Any CPA with a desire to grow and stay ahead in the
profession must . . . familiarize himself with the new
developments in data processing."

Those original words, and the quotation,
appear in Jack Carey's book The CPA Plans for the Future.
Now I yield to no man in my admiration for Jack Carey,
and what he wrote some eight or nine years ago was the
accepted truth of the time and, for many people, still
is. Yet I think we are beginning to see that such
prognostications are somewhat overdrawn. I imagine Jack
himself might share that view today.

At this point let me emphasize that what I am
saying here is by no means a denial of the importance of
computers to our profession or an assertion that a CPA
need not really concern himself about them. Quite the
contrary, the computer has immense relevance to the

profession, and every CPA should have, at the very least,
a nodding acquaintance with its capabilities and operation.
Anyone who has had the contrary idea would certainly have
to revise his thinking in light of the newspaper reports
in the last few weeks on the Equity Funding affair. My
intent is simply to outline a perception of the computer
according to what I believe is a proper perspective from
the standpoint of our profession.

What is that perspective?

In my opinion it begins with a realization
that not all practitioners, by a long shot, are going to
become highly skilled hands-on experts in computer
operation. It follows that the activities of the Institute
concerning computers should not include direct or implicit
urging of all members to such attainment.

But if the Institute is not going to play a
role of riding through the country proclaiming, "The
computers are here," what should it do for the profession
about this highly significant element of accounting
practice?

I suggest that at this point in time the
Institute should pursue an essentially pragmatic course.
Specifically, I think we should concentrate our efforts
in several general areas.

First of all, I believe that we should engage
in extensive research activities to develop a combination
of hardware configuration and software that will permit
the vast majority of our members in smaller practice units
to apply computer processing to various facets of their
practice with a minimal amount of training. In suggesting
this course of action I realize that it has not been
economically feasible for most small firms to maintain
an on site computer. Furthermore, I realize that it may
currently be unrealistic to expect a member to apply
computer techniques without extensive training. But I
believe that the rapid advances in technology are going
to change both the economics and the training requirements
of computer utilization.

You are all familiar with the trends in the
use of terminals and time-sharing as well as the develop-
ment of lower-costs mini-computers. Either of these
approaches may provide a feasible answer to the needs
of our profession, if not now, then sometime in the near
future. What I am suggesting is that we conduct extensive
research to determine what kind of approach would be
most feasibile to meet the normal needs of smaller
practitioners and then design our programming and train-
ing to fit the specific hardware that is deemed best,

Unless we adopt such a program, we shall be forever bogged down in a hopeless effort of trying to cope with an endless variety of hardware and programming languages. Worse yet, every member will be left to his own devices and any coordination of effort will be hap-hazard, at best.

A second and closely-related role of the Institute should be to mount a renewed effort to establish an effective means of making computer programs available to all members at a reasonable cost. It makes little economic sense to have so many members going it alone with the attendant waste through duplication. Surely there must be a way by which at least the majority of smaller practice units can share in the use of common programs.

It's obvious, of course, that if a common hardware approach were adopted, as I have suggested, the software problem would be greatly simplified. Under these circumstances software development could be pooled under the coordination of the Institute at great savings in cost for all concerned.

Even the large CPA firms could benefit from a well-developed software exchange program. Because of the diversity of hardware for which programs are designed,

however, the success of any such effort is apt to be somewhat limited. Nevertheless, we ought to reexamine our efforts in this area to determine whether a significant amount of needless duplication can be eliminated.

A key part of a program to bring a larger part of our membership into the mainstream of applying computer techniques ought to be the systematic development of software for various types of practice applications. These need not be highly sophisticated systems at the outset. Indeed they should be designed to be as fool-proof as possible and to require an absolute minimum of training so that they will be readily usable by the average practitioner. I am convinced that as a practitioner gains confidence through application experience his knowledge and skill in utilizing computers will evolve through a natural process.

There are a variety of fairly simple practice applications that would lend themselves to the development of standard computer programs. For example depreciation schedules, debt amortization and interest calculations, inventory analysis and even the preparation of voluminous trial balances are just a few of the applications that might be considered. I am certain that as a result of your experience you are aware of a great many more.

At the same time we should not neglect the
development of more extensive application programs that
would yield a greater payoff in terms of wide-ranging
utility. There are three principal types of applications
that I would list under this category.

The first would be a general ledger accounting
and financial statement package of sufficient flexibility
that practitioners could use it for both their internal
accounting and for providing accounting services to
clients.

A second type would be software designed to
prepare a substantial portion of a federal individual
income tax return. I am aware, of course, that it would
not be economically feasible at this time to attempt
to do a complete job comparable to Computax or one of
the other services. However, I know that some of you have
already done extensive work in this area with consider-
able success.

The third type would be general purpose audit
software. Most of the large firms have already developed
their own programs designed to carry out some of the
procedures utilized in performing audits. Each of them
are unique either as to approach, hardware used or
programming language. All of them are designed for use

on large audits and are perhaps too sophisticated for general application by a wide segment of our members. It would be very helpful if we could develop a less sophisticated and common set of audit procedure programs designed for use on medium-sized and smaller audits. This, of course, assumes that a common approach to processing such as the use of terminals and time-sharing would be adopted by at least the smaller firms. It may be that in order to be economically feasible a high volume of transactions will continue to be a necessary condition. However, the costs of computer processing are continually being reduced through new technology and we should be constantly exploring this avenue to improving our audit effectiveness through mechanization.

In addition to the roles that I have already described I believe that the Institute should expand its efforts to provide computer training. In particular we should concentrate on such subjects as computer concepts, programming and computer controls. In addition, if we are able to carry out the other programs that I have discussed our training should be directed toward their implementation by our members.

We have recognized that to do all of these things effectively we need to have a strong organization and staff within the Institute as well as a strong

group of membership committees. Accordingly, we have recently formed a new division to be known as the Computer Services Division of the Institute. This new division will have three basic responsibilities, internal applications, practice applications and carrying on the development of the Institute's Information Retrieval project.

Vice President Bill Bruschi will have over-all responsibility for the division and we have recently employed Don Adams as the Director of the Division. Mr. Adams has extensive experience both in computer consulting engagements and in operating computer installations and comes to us with very high credentials. Noel Zakin and Bob Stone will continue their activities as part of the new structure. I am confident that with this added emphasis and staffing and by gathering our computer efforts under an independent group we will be able to make even greater progress in the years ahead.

As I mentioned a few moments ago, part of the division's responsibilities will be to continue the Information Retrieval project. This is an ambitious effort which has great merit. But like all such endeavors to harness the benefits of computers we have encountered problems of economics. While the system is clearly

feasible technologically it is still uncertain whether
the potential market of users is large enough to bring
the costs in line with what users are willing to pay on
a continuing basis. The fundamental problem, of course,
is the need to recreate a new data base each year. This
is a substantial portion of the costs of the system which needs
to be spread over a broader base of users.

I hope that we shall be successful with this
program. It certainly makes sense to have a single
retrieval system available to the entire profession rather
than having every firm fending for itself with the resulting
duplication in costs. We intend to do everything possible
to achieve a permanent and successful result.

Any presentation billed as a "Keynote Address"
at a conference like this one would surely be incomplete
if it did not note that the auditing of computerized
accounting data has been conspicously mentioned in the press
from one end of the country to the other in the past few
weeks. I believe the afternoon session of your program
today will discuss some of the things being done in the
auditing of computer processed data. But apart from the
application of existing techniques, you might take note
of the announcement just two weeks ago, by LeRoy Layton,
the Institute's president, that he was appointing a
special committee to examine whether the Equity Funding

affair indicates need for new or revised auditing
procedures.

The chairman of the committee is Marvin
Stone of Denver, a past AICPA president, and additional
members are Archie MacKay, Ted Arenberg, Bob Holson and
Leo Burger. The committee will be staffed by Tom Hanley
and will look to Andy Barr as well as computer and insurance
auditing experts in the profession as consultants.

I think that the committee's study may take
quite a while because of the confusion that still prevails
over the question of how whatever it was that was done at
Equity Funding and its subsidiaries, was actually per-
formed. Before it can be decided whether a strengthening
of audit procedures is in order, one must know to what
extent, if any, the case involves weakness in present
standards, and, if so, where.

There's no use in devising a better defense
against a play over right guard (if you'll permit a foot-
ball metaphor) if a re-run of the film shows that the
greatest loss of yardage resulted from plays around left
end.

It is obvious that the Equity Funding case
must have an adverse effect on public confidence in
independent audits. A good many people among the general
public must think, "If a thing of such a scale could

happen in this case, may not there be similar situations
that haven't yet come to light?"

In any event, and even if Equity Funding hadn't
occurred, it's plain that independent auditors must be
able to effectively audit computer processed accounting
data.

I'm sure that the experience of all of us shows
that out-and-out fraud, whether it occurred in this case
or not, is relatively rare in American business and that
the vast majority of corporate managements, while under-
standably desirous of putting their best foot forward,
are sincere and honest in compiling their financial state-
ments. But the subject requires continuous study and
attention, for no matter how careful our auditing methods
may be and how they are tightened in the light of
experience, there will always be those who seek to circumvent
our efforts to their own illicit profit.

I am personally confident the profession will
deal successfully with this present problem, as it has
with tangled episodes in the past long before computers
were invented.

I want now to say again how pleased I am to
have had this occasion to be with you. A recognition of
the intimate involvement of the computer with accountancy

led to the first of these conferences, and the relation-
ship is probably even closer and more plainly to be seen
now than it was then.

I trust that, in this ninth conference, new
insights will be gained on how CPAs may benefit from
the power of the computer and how this remarkable cal-
culating tool can be utilized to render more efficient
service to clients and more efficient management of account-
ing practices.

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