

T H E      C H E C K L E S S      S O C I E T Y

An Address by

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Future anthropologists are going to be badly divided in listing the major instruments of change in the pattern of homo sapiens. Some may still vote for the wheel -- others for controlled chemical change, whether it be as simple as fire, or as complex as nuclear fission -- but there will be some line up behind the computer. And all will probably turn to a descendent of today's computer for a decision.

Of all the changes wrought by the computer, its entry into money, banking and credit will be the most pervasive. Almost every commercial transaction will be affected -- and within a comparatively few years. Startling? Perhaps -- but even more startling is the realization the hardware, the technology, is already in existence. And the spur that has advanced every innovation in our commercial and industrial society is forcing this one on us at an accelerating rate. This spur is the competition among all our industrial enterprises, big and little, for a larger share of their market, which in turn requires faster and more effective use of funds. Banks and other financial intermediaries are as reactive to this spur as any -- perhaps even more, if the volume of media advertising during the interest rate escalation of the last twelve months is considered. But in the use of computers for credit purposes, there may be many entries in the contest, for the prize will be great.

What are the components of such a system? Roughly, there are four:

(1) Small, inexpensive and reliable terminal devices at the point of commerce. These might be referred to familiarly as the little black boxes.

(2) Huge, random access computer files of information, known as the CIF, in which all manner of information about the user would be stored. His account balance, his credit rating, even statistical data would be examples.

(3) A fast communication network linking the black boxes with the CIF centers, with probably central switching computers to speed access.

(4) A machine-readable unique identification card for each individual.

May I repeat -- the basic hardware is in existence. Touch-tone telephones with a card dialer are here. Third generation computer configurations of adequate capacity are in use. The Bell System and some private networks are presently linking computers for data processing. It is possible to adapt the card dialer to requirement number 4 -- plus perhaps additional safeguards like the voice identification experimenting going on -- for a human voice is as unique as fingerprints.

A checkless society is now developing in this country, and will probably evolve to full maturity in the 1970s. To be more precise, let's say that it will be operative by 1975. This system, be it called a checkless society, an electronic cash and credit system, or a direct funds transfer system, will develop by stages. We are in the embryonic stage, with both the transfer of funds and the transfer of credit information a reality. I need cite only a few instances with which you may already be familiar:

- The on-line, real time credit transfer system being studied jointly by the Bank of Delaware, IBM and the Bell Telephone System.
- The Universal Bank Card System in the Los Angeles area.
- The California Bank Card System in San Francisco.
- The Midwest Bank Card Plan in the Chicago area.

All of these developments are in the large metropolitan areas. This is understandable. Such areas generate at least 80% of the check volume of the nation, and can economically justify the cost of experimentation and development. It is these same centers that will lead the way in establishing a checkless economy. This will occur more rapidly than we expect because of the competitive advantage that will accrue to participants in such an automated system. Our present system of payments is cumbersome and very costly. It costs your bank 12 to 13 cents to process each check that you draw. If these checks are deposited in a bank other than the drawee bank, you can add another 4 or 5 cents to the processing cost. When one considers the billions of checks that pass through the banking system each year, it is evident that our payments mechanism, as presently constituted, is a very costly proposition. The electronic transfer of funds will not only reduce the cost to the banking system, but it will also prevent us from becoming buried under an avalanche of checks that is increasing at a rate of 6% to 7% a year. In 1965, the Federal Reserve System processed over 5 billion checks and other cash items at a capacity rate of 60,000 per hour on a high speed computer, contrasted with 1,500 per hour on a proof machine of a few years ago. The improved mechanism will spread from the urban centers throughout the country and, by the end of 1975, the check as an instrument of general use for transferring funds, will be a thing of the past. It will not be limited to urban centers. The small town banker may even have an advantage, for he can either enter a joint use program with other small banks in his area, or rent time from an existing computer owner.

As you can readily visualize, this will be a massive undertaking. A data communication system with the entire banking system on-line is enough to

stagger the imagination. Furthermore, each individual bank will be the center of a network that reaches out to all of its customers. The technology to accomplish this vast undertaking is available now. All of the experts are in full agreement on this fact.

Although we have the technology, there is still a big area unresolved. This is the area of design and implementation of the systems and procedures. The implications are far-reaching. There are many legal questions. How will such a cash and credit system be owned. Where will the people come from that will man such a system? Knowledgeable people are now in short supply, and the problem is getting worse. How will we assure customer acceptance? What about business groups that will be adversely affected -- as, for example, the check printers and the envelope makers? What about the impending threat of "big brotherism"? Even now the Congress is debating this question. There are factors of great importance to the federal government and its many agencies. You can readily see the involvement of the Treasury, the Federal Reserve System, the Federal Communications Commission, the Department of Justice, and many others.

Is the Ninth District likely to keep pace with the rest of the United States in the development of new payments mechanisms? The answer has to be negative. What is the problem? The biggest problem lies in an operational paradox. Although the District abounds with advanced and thriving computer installations serving increasing numbers of banks, amid this scene of computer plenty is found the continuance of the nonpar legacy. Nonpar banking is the practice by some banks of paying the person to whom a check is drawn less than its face amount, although the deposit account of the drawer is charged the face amount. The difference, called exchange, is additional income to the bank in

which the drawer, or maker of the check, keeps his funds. 40% of all nonpar banks in the United States are in the Ninth District -- 25% are in Minnesota. They constitute a majority of the banks in only five states -- the Dakotas, Minnesota, Georgia, and Mississippi. There are only fifteen nonpar states in all. Nonpar banks are generally in the smaller towns -- but a blanket criticism of them is unfair. Many are useful, productive forces in their communities. There are those among their numbers who acknowledge the practice must phase out -- but they are reluctant to be first -- and they are even more reluctant to give up a fairly easy and lucrative practice.

Our District bankers have been in the forefront of the regional developments designed to attract new industry. Justifiable pride can be taken in the contributions of our Ninth District bankers to their communities and the Upper Midwest. But many District bankers still cling to nonpar banking. Innovation in the development of a new payments mechanism as part of a pattern of industrial growth cannot be developed in areas where there is a duplication of collection systems for par and nonpar banks.

One of the basic lessons usually learned early in any automated operation is that "exception items" (e.g., nonpar checks) can cause problems to such a degree that economic feasibility may be lost. Nonpar banking is such a stumbling block. Money and credit are flowing at high velocity now to match the fast pace of modern industry and agriculture, and the pace is increasing. To keep even with this acceleration of our economy, the checkless society must come soon. If Minnesota, North Dakota and South Dakota are to share in this growth outside the major cities, the obstructions to the free fast flow of money and credit -- the life's blood of our economy -- must be removed, or they will be bypassed.

It behooves us to start thinking now and planning for an orderly transition to a fully automated credit system. Experience in industry emphasizes the substantial lead times required for designing and implementing a large-scale information system. Years of effort are involved. Fortunately efforts are now being coordinated through the American Bankers Association, the Federal Reserve System and NABAC, the Association for Bank Audit and Control, to define an orderly framework within which this gigantic data processing and communications system may develop. It is vital that such planning proceed to completion and public acceptance in the period of a few brief years. Credit systems and money transfer systems are now developing, and will continue to develop either in a well established framework with compatible long-range goals, or in a heterogeneous conglomeration of institutional systems that will complicate the problem of eventually establishing a unified system for the transfer of funds. And in this District we must actively encourage the transition from nonpar to fully par banking if all of our communities are to be part of that system -- and part they must be if we are to share in the national economic growth such a system will be designed to serve.