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From The

Director's Desk . . .

Dissent

HUGH D. GALUSHA, JR.

As a noneconomist who has been searching anxiously for an orthodoxy in which he can find comfort in the presence of a majority of his betters, I can only say my search has been fruitless. Orthodoxy among monetary economists exists like beauty—only in the eye of the beholder. Or a more apt analogy might be a paraphrase of the description of the oboe, and say that monetary policy, at least right now, is an ill wind no one blows good. In short, I am forced to call myself a dissenter—economically and otherwise.

A new and broader American dissatisfaction has found its sharpest expression on the U.S. campus. And make no mistake, the campus disorders do not exist in vacuo. They are symptomatic of a general unhappiness with the way things are—an unhappiness that is pervasive in America today. The issues generally are reflective of national concerns—Viet Nam, race, the quality of life style. Even the issue of governance of the American university, it might be argued, is a sublimation of the distress of many of the electorate with the traditional political structure of the United States. To use another analogy, the student rebellion could be likened to an aneurism in a hypertensive body politic. Like all aneurisms, the blowout is occurring at a point where the system is weakest, for the student newly arrived in the system has not yet developed the inhibitory mechanisms that contain identical pressures in the older members of society.

I realize I am dissenting from an orthodoxy right away in this statement, for the conventional wisdom of recent months says that the dissenting student is a mutation or a sport (and I'm using "sport" in its classic sense, believe me) who is totally new in our society. According to this wisdom, these dissenters can be clearly distinguished from all the rest of American society in their idealism and concern for their fellow man in a dehumanized, mechanistic, and materialistic world. In special ways, so goes this orthodoxy, they are a total departure not only from the traditions of the United States, but have no counterparts in contemporary American society in their philosophic interests.

This dialectic is satisfying to liberals and conservatives alike, even though their reasons are quite different. For those liberals whose guilt feelings are insatiable, there is a whole new spectrum of social shortcomings. For those conservatives who require a periodic renewal of their sense of outrage, a fresh and apparently inexhaustible supply of heretics has been provided.

But this doesn't make it so. The causes of student dissent do not apply only to the student population. Students do not uniquely possess these concerns. The fact that they are an easily identifiable group within the society does produce an understandable confusion between them as instruments of expression of the concerns of society at large on the one hand, and as sources of special problems attributable to their group

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identity on the other. By this kind of categorizing, Viet Nam, racism, political change, the pressure of a congested urbanized world can be reduced to a simple issue of law and order on the campus. And this is an issue everyone understands and can articulate. In the process, attitudes shift, and the consideration of greater good of our society falls through the cracks.

It is precisely because the student dissenter is a member of a special—and easily identifiable—class that he bears a special responsibility for the way he expresses his dissent. When in the expression of that dissent he crosses the thin line between the rational act of a concerned and civilized man, and the unthinking and violent act of primordial man, he betrays all students everywhere—not only students, but their allies who share their concerns, their aspirations for a better day for human society. The tragedy of campus violence is really the human tragedy, for there are few who would turn to violence as an early resort.

Yet the majority of students will yield to the appeals to group identity and either refuse to propose alternatives for leadership or consider them if proposed. Violence is a weapon to be used sparingly, if any human society in the democratic western tradition is to be possible at all. Violence becomes contagious. The cynical reference, "One colonel out, one colonel in," describes those unstable societies where political, social, and economic changes are ushered in by regular and repeated violence.

The role of the innocent has never been an easy one, and the casualty lists of the last eighteen months testify to the numbers of innocents who have been slain in this wave of unrest on the campus.

High on the list of casualties is the educational institution itself. It has been many, many months since I read any kind word at all about universities. It is not only unfashionable, but in many circles dangerous to speak about any of the accomplishments of the American system of higher education. And, of course, this applies to any of its structural elements—students, faculty, administration, and trustees. Euphemistically referred to as the university community, they resemble more often unwilling and hostile passengers who by accident and not design have found themselves in a common vehicle they all want to drive, with no agreement at all on the

destination. Quite obviously, no student dissenter is going to step forward to defend the college system regardless of the benefits he may be deriving from it. Burning down the gymnasium may not stop Viet Nam, but it is a legitimate substitute for destroying the Pentagon. Smashing several million dollars of computers at a university installation may not clear up pollution of the environment or change the life style of society—but after all, they are machines, and they're handy. Deriding the faculty and the administration may not alter the relationships of Congress, the electorate, and the executive branch of government, but it's the next best thing. The irrationality of the dialectic I posed earlier has surely been accentuated by such irrational student response.

This is not to say the university as a political institution does not require continual reassessment and continual change. But what I am saying is that this is a separate kind of an inquiry altogether. Students have much to answer for—not only those who have been in the activist minority (with whom I can identify), or the violence-oriented activist minority (with whom I cannot), but the great mass who, like their counterparts off campus, have been inert except when provoked into response by derivative issues like the use of police—which I submit are irrelevant to the broader societal issues that started the ruckus in the first place. Student riots are mob responses—they're unthinking and amoral. The fact that they occur on university campuses with sensitive, educated people, including occasional faculty members as constituents makes them no different than any other mob response. It is a mob, and one of a kind with Brown Shirts, Black Shirts, and Hitler Youth Groups.

Not only is the delicate fabric of the university torn when mob violence occurs—a fabric that has to hold the university in its proper place in society, but the legitimate broader social causes suffer. Those of us outside the university who share concern over those causes and would like to assist with changes are denied the chance when violent students call down the wrath of society on the issues.

In many board rooms of national corporations, professional corporate managers and directors are voicing broad social concerns. I know that that statement will produce as much disbelief

as a kind word for a university, but it is so. It is more than a voiced concern; human and financial resources of many major companies are being committed to social reformation. It is not uniform, but neither is the degree of student concern uniform among all students. A significant number of corporate leaders, though, are dissenting from orthodoxy. These are the members of a new generation of corporate management (generally publicly held corporations) who view their employers as legal, political, and economic units of a broadly conceived national society. You may remember Engine Charlie's statement a few years back, which was popularly and inaccurately quoted as "What's good for General Motors has to be good for the country." The new corporate generation I'm talking about is more likely to turn the phrase around.

No, the dissenting college student is not alone, nor is he unique on the American scene—but he may soon be. Unless the student can in some way be brought to realize this, and in some way brought into a coalition with those "outside" who are marching to the same music, this will be a game nobody is going to win.

And how is this going to be done? The issue that is being joined now is the wrong issue. Whether the campus subordinates itself to the orthodoxy of law and order is not the right fight. Unfortunately, it is the fight that is being fought.

I was impressed when I visited with some students at Harvard a few weeks ago. The issues that brought about the sit-in had almost become unimportant. The issue that aroused the students—this inert middle group—was bringing in the police. The merits of the initial cause were not being debated.

I do not share the apocalyptic view that the issue is the survival of man. Man is just ornery enough—to use a good old Montana expression—to keep an impudent thumb cocked to his nose against a hostile physical universe. I would have said "world," but I suspect that's old fashioned, too. Man will survive somewhere—for he's developing the potential of physical survival somewhere in the universe. The concern shared by the dissenters on and off the campus ought to be the survival of our society. Here—and now. That this will require change—a change in the rate of change—is obvious. And I say *rate* of change advisedly, because there is

change. I used to say "in my short lifetime" I'd seen a great many things happen. I can no longer, unfortunately, refer to my lifetime in those terms. But there have been a great many changes. Our society has been receptive. It has not responded at so fast a rate, however, as the changes in our physical environment. And by "physical," I mean the kinds of machines, the kinds of physical patterns of life today.

And so the rate has to change. It is here I can become pessimistic on dark winter days in Minnesota. If Konrad Lorenz is right—and he's piling up a very impressive body of evidence for his contention that the possibilities of human social behavior are finite because the limitations are genetically carried—we do have problems. Problems posed by changes in time frames. Institutions, too, have their built-in limiters carried forward in articles, bylaws, the attitudes toward it of people inside and outside of the institution, and maybe most of all by their growing size and complexity. So at the same time society is demanding almost immediate responses across a whole broad range of changes, most of the odds are working against the capability of man and his institution to provide those responses swiftly enough.

While this does not mean that social behavior cannot be modified, it does connote limitations. And if this is so, then common sense, if not an awareness of historical perspective, must force us to seek new ways, new channels, for the voicing—and the containment of dissent. The broad humanist concerns that in their depth and degree are new in our society, whether voiced in the broader community or on the university campus by the dissenter are escalating to violence in the depressingly familiar pattern of human reaction to stress. This should be proof enough to get on with the job of finding new responses to the needs of change.

And how is this going to be done? I think the other members of the university community can play more effective roles. I will voice one of my prejudices: on many campuses these have not behaved very well. For example, the only faculty generally to come forward are those who want to man the barricades with the students. The great mass of faculty seem to have been content to pursue their disciplines and assume that society will continue to provide the same kind of a setting they have always known

in which they can carry on their pursuits. Well, that isn't going to happen; if the university communities are destroyed or materially changed by an increasingly hostile public, faculty and administrators will suffer most of all. The student is there as an undergraduate for only four years; the faculty and the administrators make their lives on the campus, and they must become concerned.

Faculty, administrators, and trustees must provide the bridge between the thoughtful dissenters on campus and their off-campus counterparts.

May I repeat the efforts of major corporate business in many communities—not all, but certainly in many communities—have really been very good. In this community, for example, the willingness of exceedingly busy corporate presidents to devote time and money to public concerns is incredible. It hasn't been well-publicized. It would be self-serving if it were. But it's a fact.

These people, however, cannot talk to students

without an intermediary, simply because they are posed as the enemy. There's kind of a Beaufort scale the student uses in classing his enemies. The faculty is on that list, but lower than the administration; and far, far lower than anybody who comes from a corporate enterprise. At the end is the banker, who is the ultimate villain. Obviously bridges have to be created. Ways have to be found to unite those who want to bring about change within the framework of western thought. That it will be painful and bruising at times is certain. It may be the effort can also be stimulating and rewarding beyond measure.

An aneurism, you know, need not be fatal, but it is symptomatic of a perilous condition. And I submit to you that unless this kind of an effort goes forward on the campuses, which are simply the measurement of this degree of tension in our society; unless a way can be found to bring about a coalition of concerned people on and off the campus, the patient may die from the aneurism.

RAUF A. KHAN

PATRICIA P. DOUGLAS

The Truth About Truth-In-Lending

Despite creditors' skepticism and debtors' apathy, the new credit rule offers the public a yardstick for comparison of rates and services.

July 1, 1969 was "Z-Day." On that date the Truth-In-Lending Bill became effective together with a whole host of regulatory statements, commonly known as Regulation Z. The Bill marks a new era in the consumer-creditor relationship.

The cliché that "credit is big business" can certainly be substantiated. Since World War II both consumer credit and the complexities surrounding consumer-creditor dealings have grown tremendously. In 1946 the total amount of money involved in the U.S. credit mechanism was about \$9 billion; by the end of 1968 that figure had increased more than 12 times to \$113 billion. Of this, \$34.1 billion was in the form of auto loans; another \$26.9 billion was in the form of personal loans; about \$4 billion comprised repair and modernization loans; and \$23.3 billion represented noninstallment credit (single payment loans, charge accounts, and service credit).¹

As impressive as those figures are, the growth in the complexity of terms and conditions (many in fine print) under which credit is extended to the sometimes unwary consumer is even more dramatic. As competition for the consumer dollar grows, the terms describing basic creditor

charges, not to mention all of the other conditions, are proliferating—loan fees, finders fees, time-price differentials, discount fees, closing fees, registration costs, prepayment penalties, service, carrying charges, points, reserves, and, of course, interest charges. And if a wary consumer had interpreted and understood these many terms, he often found that there was little relationship between the creditor's advertisement and the conditions of the contract. Both the terminology and the disparity in conditions disguised by the creditor made it virtually impossible for the consumer to compare alternative credit arrangements. Typically, therefore, in frustration or in ignorance, the consumer was left with only one useful piece of information, his monthly installment payment.

In May 1968, after seven years of deliberation, Congress passed the Consumer Credit Protection Act, commonly referred to as the Truth-In-Lending Bill. The primary objective of this Bill was to relieve consumer frustrations and to clarify certain complex areas of credit. The basic philosophy underlying the legislation was spelled out by former Senator Paul Douglas, the primary instigator of Truth-In-Lending, who felt that since consumer debt had reached un-

¹Federal Reserve Bulletin, (December 1952 and August 1969).

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precedented size, Congress should pass legislation to insure a wiser use of credit.

Apparently Congress felt that an intelligent use of credit would ensue if the consumer had all the pertinent information about its cost, because Title I of the Act, the Truth-In-Lending Bill, forces creditors to issue this information. Simply put, the legislation stipulates that a creditor tell his customer in understandable language what he charges for credit, what the customer's rights, privileges, and obligations are, and what the consequences will be if the customer defaults on his obligation. Above all, the legislation demands that all costs of obtaining the credit be stated in a uniform manner by the competitors. The Bill also spells out the conditions under which a consumer has the right to sue a creditor and to rescind certain transactions. Specific disclosures involving all credit advertising are also described by the legislation. However, the legislation neither sets any maximum limits on rates nor affects the terms and conditions of the credit. Other sections of the regulation deal with extreme credit transactions, salary and wage garnishment, and the establishment of a National Commission on Consumer Finance.

Failure to comply with the regulation, or the willful and knowing violation of the law carries a maximum \$5,000 fine, a year in jail, or both, upon conviction. Furthermore, a customer has the right to sue the creditor for twice the amount of the finance charges (not less than \$100 nor more than \$1,000) plus court costs and attorney's fees, if the creditor fails to make the required disclosures.

Enforcement of the law is complicated by the fact that because many creditors are already subject to regulatory control by various agencies, their supervision and enforcement therefore had to be given to these various agencies. For example, national banks fall within the purview of the Comptroller of the Currency, state member banks within their local area Federal Reserve Bank, and nonmember insured banks report to the Supervising Examiner for the district within which the bank is located. Most other savings institutions report to the Federal Home Loan Bank District agent or to the regional office of the Bureau of Federal Credit Unions. (Some specialty creditors report to their nearest administrative office; for

example, meat packers are responsible to the nearest Packers and Stockyards Administration area supervisor.) All other creditors including retailers, department stores, and consumer finance companies will be supervised by the Federal Trade Commission. There are a total of nine federal agencies responsible for enforcing Regulation Z.

The Scope of the Act

The purpose for which credit is extended forms the primary test of whether or not a credit transaction is covered by the Truth-In-Lending legislation. More specifically, a transaction must satisfy each of the following criteria to be subject to the requirements of the Act.

1. The credit customer must be an individual or a natural person. Legal entities, such as corporations, partnerships, estates, or trusts are excluded under the Act.
2. The credit extended must be utilized for personal, family, household, or agricultural purposes.
3. The credit must involve a finance charge or an obligation which is repayable in more than four installments.

The Act not only gives a broad definition of credit, creditor, and purpose but also defines these terms, for the first time, from a consumer point of view. Consumer credit, based on the above criteria, is defined as that credit which is offered or extended to an individual for the purchase of personal goods, real estate, family goods, and agricultural products, and must involve an obligation which is repayable in more than four installments. Agricultural products are in turn defined to include agricultural, horticultural, viticultural, and dairy products, livestock, wildlife, poultry, bees, forest products, fish and shellfish, and any manufactured products which are processed or derived from these individual products.

A creditor is any person or organization who ordinarily extends or arranges for the extension of consumer credit, including anyone who offers to extend or arrange for the extension of such credit. Under this definition all established creditors such as banks, credit unions, finance companies, department stores, credit card is-

suers, and life insurance companies are subject to the Act. Additionally, certain organizations and companies usually not considered as recognized "creditors" are also forced to comply with the requirements of the Act. A real estate broker or an auto dealer who arranges a buyer's credit from a financial institution is a creditor, so is a college or university which offers loans to students, and the state or county assessor who offers a discount as an incentive for early payment.

As mentioned above, whether a transaction is subject to the regulation depends upon the purpose for which the credit is extended rather than the form of credit. The purpose may be *primarily*—as opposed to solely—offered for personal family, household, or agricultural uses.

As broad as the legislation may appear, a few transactions are exempt: creditors servicing nonfarm businesses and governmental units are exempt and so are utility bills from local gas and electric companies. The legislation also excludes transactions in securities and commodities accounts with a broker-dealer registered with the Securities and Exchange Commission, and nonreal estate credit of more than \$25,000. Also excluded are those transactions in which the credit customer is a corporation, partnership, or any other organization.

Credit that involves any type of security interest (any interest in property which secures payment or performance of an obligation, such as mortgages or deeds of trust) in the real estate of a consumer is subject to the requirement. However, it is not necessary for a creditor to show the total dollar amount of the finance charge on a credit sale or first mortgage loan to finance the purchase of the customer's dwelling. In many instances the customer has the right to cancel a credit arrangement within three business days if his residence is used as collateral for credit; depending upon the speed of communications, the three-day limit may be considerably longer because the proof is whether or not written notice was prepared and sent within three business days. Furthermore, the Act specifies that a creditor must furnish each customer with a notice describing the "right to rescind" privileges, except when the transaction involves a first mortgage to finance the purchase of a residence.

Disclosure Requirements²

The information which must be furnished to the consumer depends upon whether or not the transaction is classified as an open-ended credit arrangement. Typically, open-ended credit covers most credit cards and revolving charge accounts in retail stores where finance charges are levied on unpaid balances each month.³ Creditors falling within this classification must disclose the following information:

1. The conditions under which a finance charge may be levied and the "free period" within which the total payment may be made to avoid the finance charge.
2. The method of computing the finance charge.
3. The procedure by which the balance, on which charges may be imposed, is determined.
4. The periodic rate(s), the corresponding annual percentage rate(s), and the range of balances to which they may be applicable.
5. The provisions for imposing additional charges and the method of determining such charges.
6. Conditions under which creditors may acquire security interest in a customer's property, and a description of that interest.
7. The minimum periodic payment.

Some creditors such as physicians, dentists, attorneys, and other small businesses who usually do not charge interest on unpaid accounts may feel that they are not affected by the Act. Such is not the case; the Act specifies that any creditor who allows the total amount of the bill to be paid in more than four installments must make a brief disclosure to the customer.

²For interpretations and specific information concerning disclosure requirements, readers are advised to contact Publication Services, Division of Administrative Services, Board of Governors of The Federal Reserve System, Washington, D.C. 20551.

³Regulation Z defines open-ended credit as that credit extended on an account pursuant to a plan under which: 1) the creditor may permit the customer to make purchases or obtain loans from time to time, directly from the creditor or indirectly by using a credit card; 2) the customer has the privilege of paying the balance in full or in installments; and 3) a finance charge may be computed by the creditor from time to time on an outstanding unpaid balance.

It should also be noted that a down payment does not constitute an installment under the law. Following is an example of how a businessman who doesn't impose interest or carrying charges must make the disclosure to conform with the regulation:

Cash price:	\$100.00
Less down payment	20.00
Unpaid balance of amount owed	80.00
FINANCE CHARGES	NONE
ANNUAL PERCENTAGE RATE	NONE
TOTAL OF PAYMENTS	80.00

Customer hereby agrees to pay (Creditor's name) the TOTAL OF PAYMENTS shown above in 8 monthly installments of \$10.00, the first being payable on (Date) 1969 and all subsequent installments on the same day of each consecutive month until paid in full.

In all other types of credit (generally that used for the purchase of big-ticket merchandise), the creditor must furnish the customer with the following information, together with any additional information relating to the type of credit extended:

1. The total dollar amount of the finance charge (with the exception of real estate transactions).
2. The annual percentage rate.
3. The date of the application of the finance charge, if different from the date of the transaction.
4. The amount, due date, and number of payments.
5. The sum of these payments, except when the purchase involves a first mortgage.
6. The amount of any default, delinquency, or late payment charges and the method of computation involved.
7. A description of any security interest.

The terms "finance charge" and "annual percentage rate" are used repeatedly throughout the disclosure requirements. They should be, for as the introduction to Regulation Z states, "these two terms are meant to tell customers, at a glance, how much they are paying for credit and the relative cost in percentage terms."

The finance charge is the dollar cost of credit, the sum total of all charges incurred by the customer—charges paid by someone on behalf of the customer as well as charges paid to someone other than the creditor receiving the payment. There is no distinction between add-on charges (includes service or escrow charges, loan fees, finders' fees, etc.) and time-price differentials, such as discounts and rebates: all are finance charges. The initial regulation even included discount charges, but on August 11, 1969, the Federal Reserve Board issued an amendment that effectively excludes discounts under 5 percent. Regardless of existing state laws (some states already had legislation similar to Regulation Z), any charge which is incident to or a condition of a credit transaction constitutes a finance charge. For example, loan fees, investigation fees, and points on mortgage transactions when paid by the seller are finance charges.

A certain amount of flexibility is afforded the creditor which tends to complicate matters. Depending upon his ingenuity in handling the transaction, he may or may not assign certain costs to the finance charge. If he informs his customer that a transaction does not warrant credit life insurance coverage, then any voluntary coverage can be excluded from the finance charge. In another instance, he may exclude a specific insurance cost, such as liability insurance, if he discloses to the customer that he may elect to purchase the insurance from someone else. However, the finance charge must include insurance necessary to protect the creditor against a customer's default; premiums for FHA insurance must be included, for example. The costs of settlement in real estate transactions are not included provided they are reasonable, bona fide, and not excluded for the purpose of evasion.

Once the creditor has determined the finance charge, the next requirement to be disclosed is the annual percentage rate, the cost of credit in percentage terms. This cost must be calculated according to the actuarial (unpaid balance) method. Following this procedure, often used in the mortgage-lending industry, the dollar finance charges are distributed in accordance with the series of declining unpaid balances. This means that the payments are applied to the interest first and then to the principle, the

interest for each period being stated as a percentage of the unpaid balance. Although there are a number of ways to calculate the annual percentage rate, perhaps the following example will give the creditor some idea of the necessary calculation.

If a loan of \$1,000 with \$120 as an add-on finance charge is repayable in 18 equal monthly installments, then a creditor can compute the annual percentage rate from special disclosure tables published by the Federal Reserve Board. The finance charge is divided by the amount borrowed and multiplied by 100 to obtain the finance charge per \$100 of amount borrowed. Using our example, this computation ($120/1000 \times 100$) yields \$12. In the accompanying table, follow the line across from 18 (number of payments) to 12.08, the first number which is equal to or greater than 12. The annual percentage rate is 14.75 which is read by following the line upward.

Number of Payments	ANNUAL PERCENTAGE RATE					
	14.00%	14.25%	14.50%	14.75%	15.00%	15.25%
	(Finance Charge per \$100 of Amount Financed)					
1	1.17	1.19	1.21	1.23	1.25	1.27
2	1.75	1.78	1.82	1.85	1.88	1.91
3	2.34	2.38	2.43	2.47	2.51	2.55
4	2.93	2.99	3.04	3.09	3.14	3.20
5	3.53	3.59	3.65	3.72	3.78	3.84
6	4.12	4.20	4.27	4.35	4.42	4.49
7	4.72	4.81	4.89	4.98	5.06	5.15
8	5.32	5.42	5.51	5.61	5.71	5.80
9	5.92	6.03	6.14	6.25	6.35	6.46
10	6.53	6.65	6.77	6.88	7.00	7.12
11	7.14	7.27	7.40	7.53	7.66	7.79
12	7.74	7.89	8.03	8.17	8.31	8.45
13	8.36	8.51	8.66	8.81	8.97	9.12
14	8.97	9.13	9.30	9.46	9.63	9.79
15	9.59	9.76	9.94	10.11	10.29	10.47
16	10.20	10.39	10.58	10.77	10.95	11.14
17	10.82	11.02	11.22	11.42	11.62	11.82
18	11.45	11.66	11.87	12.08	12.29	12.50
19	12.07	12.30	12.52	12.74	12.97	13.19
20	12.70	12.93	13.17	13.41	13.64	13.88

For open-end transactions, the annual percentage rate can be computed by the following method: divide the finance charge by the unpaid balance; this will give the creditor the rate for one month or whatever other time period is used. Then multiply this result by 12 or the number of time periods used during the year.

Under the Truth-In-Lending legislation, creditors are given some margin for error because the percentage rate need only be approximated to the nearest fourth of a percent. If two alternative methods are used to compute the annual percentage rate, it is recommended that the highest rate be used for purposes of customer disclosure.

These same disclosure rules apply to public advertising which aids or promotes any extension of consumer credit regardless of who the advertiser may be. An association, for example, which advertises that its members extend consumer credit is subject to the advertising provisions of Regulation Z. The creditor generally cannot advertise that the down payment, installment plan, or amount of credit can be arranged unless he usually arranges this type of credit; furthermore, a creditor is no longer permitted to advertise any specific credit term unless all other terms involved are stated clearly and can be easily seen. For example, advertisements displaying "no money down," "\$5.00 a week," or "take 3 years to repay," are considered illegal unless the creditor also makes a complete disclosure of all other terms and conditions.

Assessing the Regulation—An Overview

After discussing the dimensions of the regulation, it is time to consider its purpose, benefits, and pitfalls. In analyzing these, it must be remembered that the law does not set maximum rates nor prescribe credit conditions; it only affects the way these conditions are communicated to the consumer. The question to be asked, then, is whether or not a full disclosure of the terms and costs of credit will have an impact on the consumer and his buying habits and, if so, how much will he benefit from this information? It can be argued that the more information one has, the better he will fare in the market place. With full and consistent disclosure, credit terms and rates can be compared, thus enabling consumers to choose the cheapest and most liberal creditors. Consequently, competition for the consumer dollar may increase, and finance charges may be lowered—which, in turn, may increase sales. In the past, only the most sophisticated consumer could read and understand the fine print and compute the finance charges; now, clear and conspicuous dis-

closure can at least be considered an additional service to the consumer, even if he fails to use the information for comparative purposes.

Because of the disclosure of rates, terms, and conditions, the creditors with high or unreasonable charges will become more conspicuous; and some creditors may begin offering a range of rates corresponding to the borrower's credit-worthiness and collateral.

Creditors providing sound credit plans and reasonable rates may well benefit from the law; comparisons by consumers will highlight their credit conditions and increase their volume of business. Moreover, Truth-In-Lending may generate pressure among lenders to evaluate their rates with respect to the services provided, which may result in an improvement of both rates and services.

All these points pertaining to the benefits of such a law have one common assumption: that the consumer, the credit customer, will use this information to decide between cash and credit patterns of buying, to evaluate alternative sources of credit, and to bargain for fair and equal treatment by all creditors. But the mere existence of the Truth-In-Lending Act does not make that presumption a fact; credit conditions and rates are not the only criteria for the use and level of credit. Consumer attitudes, standards of living, and promotional schemes also influence credit patterns. The buy-now-pay-later attitude of the American consumer, coupled with his rising affluence, has contributed to a philosophy that attaches very little importance to the cost of credit; his paramount interests are his weekly or monthly payments and the convenience and speed of obtaining credit. Furthermore, a majority of the lower-income class and a large part of the middle-class families may still remain insensitive to rate and condition differences, simply because they lack alternative sources of borrowing.

In short, the benefits are far from certain. The regulation will probably be administratively cumbersome. For the economy as a whole, the costs of administrative and enforcement personnel and procedures may well outweigh the consumer savings and benefits, presuming there are some. A recent survey by *The Wall Street Journal* (July 11, 1969) concludes that the legislation and regulations "have been greeted with hostility by many of those

who merchandise credit and with apathy by a good many of those who must resort to installment contracts to buy goods they need."

Although it is too soon to fully measure the impact of Truth-In-Lending on Missoula creditors, the authors thought it would be interesting to obtain the reactions of local businessmen. Consequently businesses, ranging from savings institutions, retailers, and auto dealers to lawyers and accountants were informally interviewed in an effort to determine the effect of the regulation on such things as workload, advertising, and rate charged.

All businessmen contacted felt that Truth-In-Lending had the greatest impact in the area of employee workloads and advertising policies. Retailers and financial institutions are among the types of firm which have changed advertising policies. A large percentage of this group of businessmen remarked that while they had previously advertised the amount of monthly payments and down payment required to purchase large items, they have reverted to more general advertising statements such as "easy terms" rather than to provide the required details concerning finance charges, and other such information.

Most Missoula businessmen reached by the authors felt that the new legislation has in no way affected the rates charged the consumers. This should not be interpreted as their predictions for the future; it only reflects their experiences to date. As one businessman pointed out: with interest rates as high as they are, one cannot really anticipate any immediate decline in finance charges; nonetheless if credit eases, there may be more consumer shopping for credit, and competition may force a change in interest rates.

The authors found that the businessmen contacted were sharply divided in their opinion about the long-range impact of the legislation. At one extreme, some businessmen felt that the Bill was long overdue and that after an educational period the average consumer would learn to take more interest in evaluating alternative credit sources; although they were unhappy that it took government intervention to establish such disclosure requirements. On the other hand, some businessmen argued that the regulation was enacted to save the consumers from the clutches of the unscrupulous creditors,

especially in large metropolitan cities, "where the loan sharks reside," but the unfortunate consequences will also be borne by all businesses regardless of their size, type, and credit philosophy. They described the legislation as a "nuisance" and a "headache" and questioned the value of disclosed information to those consumers who will remain unsophisticated borrowers and buyers despite the disclosure of annual percentage rates and finance charges. Some businessmen raised the issue of administrative costs and enforcement procedures relating to the Act, speculating that the consumer would undoubtedly pay for these costs in the long run; the question remained whether or not the benefits would exceed the large anticipated costs to all.

Massachusetts has required the disclosure of finance charges as an annual percentage rate on practically all consumer credit transactions since January 1, 1967. Recently, the experiences of Massachusetts businessmen and consumers were evaluated for purposes of anticipating some of the results to be expected at the national level. The conclusions of the researchers suggest that the experience with Truth-In-Lending has been neither as good as expected by the advocates nor as bad as feared by its critics:

As of the time of this survey, the impact has been minimal. Only a comparatively insignificant percentage of consumers have taken advantage of the disclosure of annual finance charge rates, and lenders and retailers have found they can operate under the law without substantial difficulty. Similarly, no evidence was found in this survey to suggest that any drastic changes in the effects of the law will occur soon.⁴

The researchers felt, however, that through a long and gradual process of education, consumers may learn to use annual finance charge rates for comparison shopping to their benefit. It was also noted that the gradual nature of the process should minimize any sudden adverse effects of disclosure on creditors.

Despite the pros and cons, Truth-In-Lending is here to stay. The creditors, by complying with the law, may be forced to reevaluate their positions in the market in terms of rates and services; perhaps the disclosure rules will jeopardize the positions of fraudulent and unethical lenders. On the other hand, through education, consumers may learn to use the finance charge and the annual percentage rate as yardsticks for comparison to their advantage.

"The Impact of Truth-In-Lending Legislation: The Massachusetts Experience," *New England Business Review* (October 1968), p. 7, an article based on a study done for the Federal Reserve Bank of Boston by Professor Pullen of Colby College.

THOMAS PAYNE

Changing the Guard

Generations and Tides in American Politics

Students of American political behavior have long been fascinated with the question as to whether some form of cyclic phenomenon manifests itself in the pattern of election outcomes which emerge over time. The periodic swings in electoral trends that observers have professed to see have been variously attributed to the influence of sun spots, the impact of economic trends, or the changing preferences of voters for liberal and conservative policies.¹ Professor Schlesinger once advanced the hypothesis that policy cycles alternate between liberal and conservative periods, the former averaging 16.5 years and the latter 15 years.² Since then new methods in the study of voting behavior and political socialization have yielded a body of data and insight which may throw some light on earlier assumptions about political cycles.

More recently a number of respected authorities on voting behavior have undertaken the task of classifying presidential elections, and the theory of critical elections has been advanced. The late V. O. Key, Jr., described such elections as:

... a category of elections in which voters are, at least from impressionistic evidence, unusually deeply concerned, in which the extent of electoral involvement is relatively quite high, and in which the decisive results of the voting reveal a sharp alteration of the pre-existing cleavage within the electorate. Moreover, and perhaps this is the truly differentiating characteristic of this sort of election, the realignment made manifest in the voting in such elections seems to persist for several succeeding elections. All these characteristics cumulate to the conception of an election type in which the depth and intensity of electoral involvement are high, in which more or less profound readjustments occur in the relations of power within the community, and in which new and durable electoral groupings are formed.³

Both Key and the authors of *The American Voter* have included in their classification of presidential elections the concept of the realigning election, in which "popular feeling associated with politics is sufficiently intense that the basic partisan commitments of a portion of the electorate change. Such shifts are infrequent."⁴

That the presidential election of 1968 may signify the end of a political epoch has been predicted by discerning political commentators.

¹A useful summary of the more suggestive hypotheses is contained in V. O. Key, Jr., *Politics, Parties, and Pressure Groups*, 5th ed. (New York: Thomas Y. Crowell Company, 1964, pp. 541-542.

²Arthur M. Schlesinger, "Tides of American Politics," *The Yale Review*, 29, No. 2 (December 1934), especially pp. 219-223.

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³V. O. Key, Jr., "A Theory of Critical Elections," *Journal of Politics*, 17, No. 1 (February 1955), p. 4.

⁴Angus Campbell et al., *The American Voter*, abridged ed. (New York: John Wiley and Sons, Inc., 1964), p. 276.

Among others, Walter Lippmann, Roscoe Drummond, James Reston, and Joseph Kraft have alerted their readers to the real possibility that we have reached a major watershed in our political affairs. Popular commentators speak of a "generation gap" which makes it ever more difficult for political elders to inspire the confidence of, or even reach, the rising generation. Thus Lippmann has written:

As men grow older and take charge of affairs, they must battle a persistent human tendency to see the world through spectacles that fitted them twenty or thirty years earlier. When they are not successful in distinguishing between what they learned when they were young and what the reality is coming to be now that they are older, generation gap results.⁵

James Reston, noting the same phenomenon, asserts that, "the gap between an increasingly young American population and the aging elders among the congressional leaders and committee chairmen is widening."⁶

The study of political generations confronts methodological pitfalls. What follows does not represent a body of empirically verified propositions; at best they could be described as tentative hypotheses or assumptions which admittedly could profit from a more rigorous formulation. Unfortunately, it has not been possible thus far to amass a body of quantitative data which would strengthen these assumptions. I am trying to report merely what I see as I look at the available evidence in the aggregate. The generation hypothesis is not an exclusive causative force—only one factor at work in a complex political system. As we seek to understand the forces of stability and change within that system, the generation hypothesis may be another serviceable analytical tool to help us in our understanding of electoral behavior.

In essence what is contended here is that realigning presidential elections occur at regular intervals while new political generations concurrently assume command of the political system, replacing retiring generations which have lost the capacity to deal effectively with newer realities. The presidency is emphasized because

this institution, more than any other, represents the political aspirations of the American people, and because presidential elections have, since the foundation of the Republic, been regarded as the most important single measure of the long-term course of political development.

The term *election*, as used here, refers to election-year activities other than the formal balloting in November. Nominations, campaigns, and coalition building are integral features of a presidential election. What a particular election signifies for future developments is not always immediately apparent when all of the returns are in and the winner has been declared. The outcome may indicate possibilities for establishing an enduring coalition boding well for the future of the party. Often this may be clear only after the election returns have been fully appraised by politicians and group leaders.

To appreciate the implications of the argument that so-called critical elections tend to coincide with fundamental shifts in generational control of the political system, it is helpful to repeat some suggestive phrases from Key's definition of critical elections, quoted earlier. In such elections, Key suggested that "more or less profound readjustments occur in the relations of power" and that "new and durable electoral groupings are formed." The presidential elections of 1860, 1896, and 1932 are generally accepted as falling into the category of "critical" or "realigning" elections. Each of these elections produced a basic regrouping of the political interests and a rather fundamental shift in the direction of public policy. The election of 1860, for example, brought victory to the newly-established Republican Party, leading in turn to the ending of slavery, the more rapid development of industry, and a changed policy both towards agriculture and the tariff. A coalition of farmers and businessmen forged by this election determined the basic political issues of the next third of a century. The election of 1860 also represented a sharp break with the pre-1860 era in politics which had been characterized by the dominant position of the South, lower tariffs, and the maintenance of slavery.

While the election of 1896 continued the prevailing Republican rule that had characterized most of the preceding epoch, it brought new issues to the fore. No longer could the party point

⁵Walter Lippman, "What We Offer," *Harper's Magazine* (October 1967), p. 45.

⁶*Great Falls Tribune*, January 23, 1967.

to its Civil War policies as a sure formula for victory. The rise of an urban working class necessitated a broader Republican appeal. As the election of 1896 departed from the style of the 1870s and 1880s, it also firmly and finally resolved the money question which had haunted the politics of that era. Coincidentally, 1896 hastened the emergence of the United States as a world power involved in international ventures beyond its borders. The dominant Republican majority included in its winning political coalition sizable numbers of the urban working population as well as the familiar farm and business groups of the preceding epoch.

But of all realigning elections, that of 1932 stands in clearest relief. The victory of Franklin D. Roosevelt and his Democratic Party represented a sharp and enduring break with the normally Republican outcomes of the previous seven decades. It is unnecessary here to catalog the array of new policies which were adopted in the wake of the Democratic triumph, but the New Deal represents the arrival of Big Government and the Welfare State. The new dominant coalition was fashioned from some of the old elements in the Democratic Party, such as the South and the big city political machines, to which were added minority groups, the small farmers, and the economically disadvantaged of all parts of the country.

Looking farther back in political history it is clear that the onset of Jacksonian Democracy marks another fundamental realignment in political affairs. With the advent of Jackson, the frontier for the first time made its presence fully felt in the policy process and a general democratization of American life followed. Fundamental shifts in the policy occurred in such areas as the United States banks, the tariff, and the role of government in the society. From accounts of the coming to power of the Jacksonians, it is clear that their victory ended the rule of the earlier Virginia dynasty and produced changes of landmark proportions in the political style and administrative system of the new epoch. The Jacksonians actually won a plurality of the popular vote in 1824 but, because of the vagaries of the electoral system, were denied the presidential prize until 1828.

In sum, each of these realigning elections brought in its train a new and different political orientation or style. In each of the critical elec-

tions a new political leadership emerged which was able to fashion a strong, victorious, and lasting political coalition by uniting elements not previously brought together. After each of the critical elections a fundamental shift occurred in public policy, and the political styles, issues, and debates of the past were ignored or brushed aside as irrelevant.

When one lists the dates of the realigning presidential elections since 1788—1824, 1860, 1896, and 1932—one is astonished to discover that at equal intervals of thirty-six years the United States has experienced such critical elections. Is such a rhythmic sequence pure happenstance, or does it fit logically into some natural and hitherto undetected pattern of political behavior? I contend that such uncanny rhythm has not occurred by chance, nor has it depended on the accidental emergence of so-called "great men" (such as Lincoln or Roosevelt) at the "right times." Rather, I am advancing the hypothesis that each of these landmark elections has represented a changing of the guard of the political generations, with a rising generation succeeding in political power one that is passing from the scene. While this proposition is speculative and cannot be "proved" on the basis of admittedly largely historical and impressionistic evidence, it can be useful in understanding the preceding political epochs and in placing in perspective the social and political events of an unsettled present.

Each new political generation in turn develops a political orientation distinctive to its particular epoch.⁷ Most of each new generation possessed a common memory of the significant events which shaped the political style issues of the era. The events of the American Civil War were to provide a common frame of reference for those who took command of the political system in 1860. For those of the political generation which came of age in the 1930s the events of the depression afford a common political orientation and a common memory. In both instances, of course, there were proponents and opponents of major policy changes, but all were locked, nevertheless, in the particular orienta-

⁷The term "political orientation" is from David Easton and Robert D. Hess, "The Child's Political World," reprinted in Edward C. Dreyer and Walter A. Rosenbaum, *Political Opinion and Electoral Behavior* (Belmont, California: Wadsworth, 1966), p. 151.

tion with which that generation of political leaders and participants looked at the questions of their time. The style, outlook, or orientation of a particular generation can be viewed in another way as a kind of mold, which limits and sets the character of the debate and issues of an epoch. Such molds cannot, obviously, be discarded frequently. The orientation of an age is partly the function of political socialization, the process by which the young acquire their political orientations from parents, teachers, and peers.⁸

One might think that political socialization would permit a political orientation to last indefinitely; and indeed in a tradition-based society it might. But in a political system such as ours technological change is a continuing feature, manifesting itself in the formation of new political interests and the injection of new problems. The passage of time makes it increasingly difficult for the leadership in a particular age to deal with the new issues, for their orientations tend to "freeze" them in the mold of their particular epoch. The actors in this epochal drama are doomed to play out their roles. They cannot, ordinarily at least, master the newer orientation that would enable them to deal effectively with the newer problems. Increasingly, the old nostrums which they know so well become irrelevant, and, as a result, more and more issues accumulate that cannot be resolved by their leadership. A political leadership nurtured by one generation cannot be expected to abandon the tactics, the style, the orientations, the values that brought it to victory in the first place. Very much like Anthony Downs' "conservers" in bureaucracy, these men are trapped in a dying political order.⁹ Such was the common fate of John Quincy Adams, of Buchanan, of Cleveland, and of Hoover.

Just as it is difficult for the political leadership of a dying political generation to deal effectively with the newer issues that press inevitably for solution, it is impossible for those new to the political scene to share the common memories of the dying generation. As the political generation launched by the events of the

1860s neared its termination, memories of the Civil War had faded. Each passing year brought into the electorate new voters who could have no firsthand knowledge of the reality of events now distant and forgotten by all but the older members of that epoch. Such younger persons could not respond to an evocation of memories of a distant past, to the waving of the proverbial "bloody shirt." Meanwhile, the passing years too took their toll as more and more of those who had experienced the great trauma were permanently removed by death. A moment arrived in the history of the system when the rising generation constituted a majority and when the old political order could no longer postpone dealing with the challenging problems which its own ideological commitments had rendered it powerless to resolve. A new political generation came of age triumphantly in a "critical" election. Can it be only a historical accident that the Civil War came in 1861 or that the New Deal came in 1933? These events reflect the solutions of a new generation of political leaders to problems which their predecessors were unable to solve.

But why, it will be asked, does a new political generation take command at intervals of 36 years? There is something suspiciously "pat" about this remarkable regularity. It is interesting to note that Jefferson developed a theory of political generations, of sorts, arguing from the mortality tables of his time that at intervals of 20 years a new generation came to power.¹⁰ Schlesinger found the combined duration of alternate liberal and conservative periods averaged 31.5 years, but his focus was to a considerable extent upon the legislative branch. Recent studies of voting behavior indicate that the age of political participation seems to run from the middle or late twenties to the middle to late sixties.¹¹ The age of 48 marks a kind of arbitrary median, which might suggest that a major realignment should come at intervals of perhaps 24 years, since it would be about this often that a completely new generation of voters would constitute a majority of the electorate. Instead, the crucial factor seems rather to be

⁸See especially Herbert Hyman, *Political Socialization* (Glencoe, Illinois: The Free Press, 1959), and the recent work of David Easton.

⁹Anthony Downs, *Inside Bureaucracy* (Boston: Little, Brown and Company, 1967).

¹⁰Jefferson to James Madison, September 1789, *The Jeffersonian Cyclopaedia*, ed. J. P. Faley, vol. 1 (New York: Russell and Russell, 1967), pp. 375-377.

¹¹See, for example, Campbell et al., *The American Voter*, pp. 261-265.

the age of political socialization, for at that point the generational political style should be largely determined. Those who reach the age of socialization after the date of a critical election would be less likely to be stirred by the memory of the events that led to the establishment of that particular political epoch.

We cannot be certain when the individual acquires his commitment to the values of his age through political socialization, but recent findings strongly suggest that the socialization process is substantially completed at an earlier age than had been previously assumed, probably no later than the completion of elementary schooling, and, for some values, much earlier.¹² Admitting that the data available on the age of political socialization are incomplete and that we have much to learn about the ages of most active political participation, I here hypothesize that the child acquires the orientation of his generation at age twelve. If we assume forty-eight as the age when the dividing line between the younger and older portions of the active voting population is drawn, the age at which we can say the generation balance is tipped in favor of the younger group, we can see that by simple arithmetic a period of thirty-six years has ensued. It is my hypothesis that this much time from the start of one political generation must elapse before a new generation can take command, on the assumption that those who are socialized after the start of a particular political era are unlikely to acquire the values of that generation and that it takes precisely thirty-six years for them to assume command of the new rising generation. I am not suggesting that there are not enduring values that persist from generation to generation; we know that ideas about the "rules of the game," about the Constitution, and about basic commitment to the regime or system are enduring. But I am suggesting that the political orientations, ideological commitments, if you will, and modes of dealing with the political problems of the times seem to be cast in generation molds of thirty-six years duration, at least for purposes of presidential politics.

¹²See Easton and Hess, *Political Opinion and Electoral Behavior*. See also, David Easton and Jack Dennis, "The Child's Acquisition of Regime Norms: Political Efficacy," *The American Political Science Review*, 56, No. 1 (March 1967), pp. 25-38.

A noticeable feature of the changing of the political guard of the generations is that it is accompanied by an unusual amount of political party upheaval. Ideological ferment seems to reach a high pitch at such periods, perhaps because of the frustrating inability of the new prospective political order to break through the communication gap of the generation mold. Splits within the existing party structure, the appearance of new parties, together with substantial shifting within the party systems occur. Such activity is not, of course, confined exclusively to these periods, only heightened. It is worth recalling the splintering that accompanied the close of the Era of Good Feeling in the 1820s, as well as that which preceded the election of 1860. The high peak of farm-laborer activity preceding the elections of 1896 and 1932 is notable, too, as is the rise of Populism in the 1890s. These activities indicate that the interests of a new age are in ferment and are searching for new political avenues of expression; that they are also experiencing growing frustration occasioned by the blockage of the old political order, increasingly out of touch with the emerging generation and persistent in its attachment to the familiar orientations of an order that is passing.

Looked at from this angle, one can sense the remarkable comparison between the presidents whose terms came at the end of political epochs. In James Buchanan, in Grover Cleveland, and in Herbert Hoover we see a common bewilderment in the face of the new age. In a country committed to change, there had arisen a new generation which knew not the values, the ideology, the orientations of the old; no wonder these men were bewildered. We find that as we get farther in time from the watershed that marked the inaugural of a new political epoch, the old orientations become both less relevant and less acceptable to members of a new generation who do not value the values of the old. Perhaps in the common plight—indeed the common tragedy—of able men caught in the vice of time, we may see a clue to our own political fate.

The presidential election year of 1968 marked the arrival of another of those thirty-six-year intervals in American politics, which in the past unfailingly produced realigning elections. If the theory that realigning elections coincide with the coming of age of new political generations

is valid, it should have somehow been represented in the November 1968 outcome. As is often true when seemingly simple propositions are applied to complex events, the 1968 returns looked at superficially do not provide a clear-cut confirmation or rejection of the hypothesis. It may be, however, that if we look at the event in broad perspective we may observe suggestive developments which taken together indicate that the proposition has been operative.

To begin with, it is noteworthy that the Lyndon Johnson Administration did have a good deal in common with those which came at the close of preceding political epochs. President Johnson experienced the loss of popular political support that had been the fate of such presidents as John Q. Adams, James Buchanan, Grover Cleveland, and Herbert Hoover, all of whom came at the end of political epochs and fell from power at the moment of realigning elections. It seems especially significant that Johnson first came to Washington in 1932, and was associated intimately with the national political scene throughout the epoch that has just ended. Elected by the greatest landslide victory in American political history in 1964, President Johnson had every reason to expect reelection in 1968. Yet on March 31, 1968, bowing to his realization of a great loss of support, he withdrew from the presidential competition by announcing that he would not seek a second full term. Could this capable political leader, so successful in dealing with the problems of his epoch, have been the victim of generational change which was bringing to the fore a generation out of

touch with the kinds of problems that had provoked Johnson's attention? By the end of Johnson's term a majority of the electorate had no firsthand experience with the depression years beginning in 1929, which had so significantly determined the political style of the Roosevelt-Truman years. Nor were the events of World War II more than a faint memory to many of the rising political generation. An age of affluence had begot a multitude of new problems for which the "Old Liberalism" of the epoch that was coming to a close had little relevant to offer. The rejection of former Vice-President Hubert Humphrey by many of the younger members of his own party provides poignant support for this view.

Richard Nixon, the victorious presidential candidate in 1968, does not appear at first glance to meet the specifications for a political leader destined to usher in a new political age. On closer examination, however, he may fit well the requirements of an epoch that may turn out to be considerably more conservative than the one which preceded it. We have no way of knowing how the politics of the future will unfold. But the elements of an enduring new political coalition are at hand, and President Nixon's vast political experience may enable him to grasp fully the opportunities to weld together the seemingly disparate forces and fashion out of them a new Republican majority. One thing does seem certain. Over the long historical reaches of a free society succeeding political generations rise up inexorably, take command, decline, and eventually vanish from the scene.

GLENN R. BARTH

Montana's Commercial Fish

A Successful Fishing Industry; is it Economically Feasible?

Preliminary results of current Montana Fish and Game Department research indicate a substantial supply of fish in the state for commercial markets, but a significant lack of market. Some of the major species included in these estimates are goldeye, carp, and buffalofish, and other miscellaneous species, such as suckers, sheepshead, catfish, and bullhead. Harvesting these fish appears to present no unusual difficulties other than ice conditions during the winter months.

In years past, several individuals have attempted to harvest Montana commercial fish but, with few exceptions, have failed in their efforts. It may be that a considerable amount of information is needed by fishermen, resource managers, and prospective processors and handlers. The purpose of this report is to provide such needed information.

Montana lakes contain a wide variety of both game fish and commercial species. The Montana species considered to have commercial value because of their numbers and consumer demand are carp, buffalofish, and goldeye. Individual members of other species may be included in fish sales, but they are of no economic significance. Game fish may not be caught or sold by commercial fishermen.

There are almost no restrictions on entrance into Montana commercial fishing. Licenses are free to anyone who has not had a license revoked in another state and has some way of

disposing of the fish caught. Nominal fees are charged for the catch: 5 percent of net receipts for goldeye and catfish; \$2.00 per ton for carp, white carp, suckers, and sheepshead; and \$5.00 per ton for buffalofish. There are no restrictions on the amount that can be caught.

State Fish and Game Department records indicate that commercial fishing was begun in Montana in 1954. Several early attempts failed for lack of experience and markets. During 1966 there were two commercial fishing enterprises licensed in Montana but even these sometimes moved into North Dakota and Washington when fishing in those states appeared more profitable. In 1967 a third enterprise began operations in the state.

Most of the carp and buffalofish caught were shipped west to California, Idaho, and Washington. Most of the goldeye were shipped to buyers in Winnipeg, Canada, where they are smoked and considered a great delicacy, selling at prices from \$1.50 per pound to \$1.95 per pound at retail and \$3.50 per plate and higher in restaurants. Unfortunately, however, this survey indicated that this demand did not hold up strongly enough to make goldeye fishing successful.

Abundant information on the demand for fishery products is presented in many publications of the Bureau of Commercial Fisheries. In order to make it immediately useful for one interested in Montana fisheries, the Bureau's data was combined with data from other

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sources, organized, and then examined with Montana conditions in mind, and more specific data on the subject is available in a monograph published by the Bureau of Business and Economic Research in 1969.

The demand for fishery products, like most consumer nondurables, is closely related to the level of personal income, the prices of fish and competing products, the size of the population, and consumer tastes and preferences.

Although fish consumption measured in pounds per person per year has remained stable for many years, fluctuating around about an average of 10.7 pounds per year, income and price do have minor effects upon demand. Fish in general, along with many other food items, display an inelastic response to changes in price. A moderate price increase of, say, 10 percent in the price of fillets, will not induce a proportionate or more than proportionate decrease in consumer expenditures for the product.

In the absence of substantial changes in consumer tastes or supplies of fish, the evidence suggests that consumption will continue at approximately the same per capita level as at present. According to current population estimates, the 1980 United States demand for edible fish should be in excess of 2.5 billion pounds per year, a 39 percent increase over the 1960 consumption of 1.9 billion pounds.

No economic sector in the U.S. is immune to the effects of changing consumer tastes and preferences. Increasing discretionary purchasing power beyond the basic necessities permits the housewife the privilege of choosing more tasty, more attractive, and more easily prepared foods. Not too long ago the housewife bought fish products packed and shipped unprocessed in ice, or cured or canned. Today processed forms of fishery products such as frozen fillets, fish sticks, portions, and other convenience products have almost replaced the earlier forms.

Fresh fish are those that have not been frozen solid but have been packed in ice for a short period of time (three to four days) to prevent spoiling. The fish can be delivered fresh to a retail store by a fisherman or a wholesaler in just about any form. The form depends on the "keeping" qualities of the particular species of fish. The various ways of preparing fresh fish for market are:

1. In the round. The product goes directly from the producer without going through any form of processing.
2. Dressed or gutted. Entrails removed. Some buffalofish and a very high percentage of the game fish caught in the Upper Midwest and Canada are shipped in this form.
3. Skinned and dressed. Bullheads are usually shipped in this form, although the form in which they are marketed is very dependent upon the climatic conditions during the season of the year the fish are shipped.
4. Fillets. Head, tail, bones, and entrails removed. There appears to be quite a small market for this form of fresh fish, although it is increasing more every year, due to the fact that most consumers do not want to bother with dressing, skinning, and scaling fish.
5. Fleeced. Head, tail, entrails, and outer skin and scales are removed. Some Montana buffalofish and carp are prepared this way.

The fresh water fishery of the central United States is small, representing only 3 percent of the total United States catch and 4 percent of value in 1965. Its output is also increasingly concentrated in fresh and frozen packaged products as is true of total manufactured fishery products. The United States is not a major exporter of fisheries products; the top export figure, consisting mainly of salmon, shrimp, sardines, and fish oils was \$69 million in 1965.

Montana and Regional Demand

Montana, Idaho, Wyoming, Utah, and North and South Dakota constitute a regional market that might be expected to absorb a share of Montana fish. There are no large fisheries in this region and all these states are distant from supplies of marine fish, suggesting that Montana fish may have some competitive advantage.

But since population increases represent the only major cause of increases in total fish demand, and the level of personal income, the prices of fish and competing products, and consumer tastes and preferences have little influence in changing per capita consumption, the market potential of this area is not very high. Until ten or fifteen years ago, relatively little fish was sold in Montana and other states located in the interior of our country and not close to a large supply of fish. Because of earlier transportation problems, residents of these

states had an established food habit of eating less commercially caught fish than the United States average.

It appears that this condition continues today. As part of this research, a pilot study to determine consumer fish-eating habits and attitudes toward various species of fish was conducted in Missoula during the summer of 1968. Although a pilot study of 100 consumers in only one city is not conclusive, it can be suggestive of the probable results of a more thorough study. In this case Missoula residents reported the following frequency of fish consumption: 19 percent reported eating fish at least once a week, 46 twice a month, 32 twice a year, and 3 percent said they ate fish once a year or less. In contrast, seaport cities report that "... more than nine out of ten homemakers serve fish and seafood to their families . . . about two-thirds of them serve it once, or more times weekly." By contrasting these two studies it appears that families in Missoula, Montana may be eating fish less than one-third as often as families in major seaport cities. It seems that Montanans are not fish eaters.

Montana fish production is small, even when compared to the limited consumption in the region. Data from the Montana Department of Fish and Game would indicate a 1967 catch of 1,275,000 pounds valued at \$90,000. This estimate is based upon fish caught between April and September 1967.

The wide fluctuations in the Montana catch shown in table 1 are explained by the fishing practices in the area. When carp and buffalo-fish are in short supply in the Midwest or on the West Coast, fishermen and buyers move into Montana to meet their needs. When supplies nearer their markets are adequate they stop drawing upon Montana supplies.

In view of the foregoing evidence, the demand for Montana fish for human consumption can be characterized as light and irregular. Fish consumption in the United States is moving in the direction of more completely prepared items made from expensive marine fish and shellfish—frozen breaded fish, fish sticks, and shrimp are three examples. Even if Montana fish could be prepared as convenience foods, research discussed below suggests that Montana fish would not be generally acceptable to most housewives in the United States.

TABLE 1
FISH CAUGHT BY COMMERCIAL
FISHERIES IN MONTANA

Year	Quantity (Pounds)	Value
1956	14,000	\$ 1,000
1957	41,000	5,000
1958	141,000	10,000
1959	74,000	5,000
1960	21,000	2,000
1961	17,000	1,000
1962	86,000	9,000
1963	268,000	32,000
1964	237,000	16,000
1965	354,000	32,000
1966	692,000	51,000
1967	1,275,000	90,000

Source: *Fishery Statistics of the United States, 1956-1967*, U.S. Department of the Interior, Fish and Wildlife Service, Bureau of Commercial Fisheries, Washington, D.C., and State Fish and Game Department, Helena, Montana.

Present Marketing Channels

Most inland fisheries are faced with conditions creating risks which are similar to farming. In some cases, such as Montana's Fort Peck Reservoir, prevailing weather conditions and water level management practices will eliminate spawning seasons for years at a time. It is mandatory that the right kind of weather conditions prevail in order to harvest. During the spring, summer, and fall, high winds and rough waters often make it impossible for the fishermen to get on the water with small craft. Large nets of several varieties are difficult to handle in rough water. One study of Great Lakes fishing found that for small, part-time enterprises expenses ranged up to 80 percent of gross sales, not including returns to the labor and capital of the owner-manager. The transportation cost of commercially harvested fish is generally absorbed by the fisherman who harvests the fish. The price that he receives from the buyer at Chicago or Los Angeles is the wholesale price less transportation and commission costs. The average cost of shipping to Chicago ranges from 2.5 cents per pound from Iowa to 5.3 cents per pound from Minnesota to 8 cents per pound from Montana. The difference in transportation costs can be attributed to distance from the wholesale market. Nearly all of the fish marketed are moved by motor carrier.

The largest percentage (estimated 70 percent) of the fish from the upper midwest states are shipped to Illinois and Iowa where there are large wholesale fish markets. The remainder of the fish are shipped to southern states. A large percentage (estimated 35 to 40 percent) of the fish shipped to southern states is shipped live to be planted in fish ponds for public fishing. Most Montana fish are now shipped west. Montana buffalofish are shipped to the San Francisco Bay area for sale to fish retailers. Some carp and suckers are also sold on the coast. One Montana fisherman has been supplying carp and suckers to a trout farm in southern Idaho. All goldeye are shipped to Winnipeg. The Chicago market puts Montana fishermen in direct competition with fishermen located in much-nearer midwest states. When they sell on the West Coast they are the nearest supplier of these particular species and therefore have a cost advantage.

Chicago Fish Markets

Chicago is considered the major fish-marketing city in the United States. Fish price quotations from the Chicago market affect virtually all other major and minor fish markets throughout the country.

A daily fish-marketing report is compiled by the Bureau of Commercial Fisheries from data collected from wholesale fish markets in the Chicago area but since wholesalers often pay a wide range of prices in a given day for the same quality fish, the price listings that appear in the daily market report may not be specifically representative.

The quantity of each particular species of fish marketed in one day is also included in these daily reports, but is not necessarily correct. There are indications that, with some exceptions, the level of business ethics practiced throughout the fish trade is very low. Fishermen report that they are victimized, both in Winnipeg and Chicago, by wholesalers who cheat them on weight, price, or are slow to pay. A marginal Montana fisherman who arrives at the market with a truckload of fresh fish is in no position to bargain effectively with wholesalers.

A significant percentage (estimated 30 percent) of commercial fish that was once chan-

neled through the Chicago wholesale market is now marketed directly to large chain stores. These chain stores have facilities for preparing fish for sale on the retail fresh fish market. This practice of shipping directly to chain stores from small-town wholesalers and fishermen seems to be developing as a trend in the fish business. This change has caused the elimination of many of Chicago's wholesale and retail fish firms.

There are no daily price quotations posted by a fish wholesaler as are found in a grain elevator or a livestock marketing center because no two fishermen may get the same price for their fish (regardless of quality) during a given market day. Wholesalers base their prices paid on the number of pounds of fish offered by the individual fisherman during that particular day, the dependability and regularity of the fisherman throughout the year, demand for the particular species of fish, as well as the quality of fish. The quantity and quality of a particular species that has already reached the market during that particular market day or week is also of major importance; scarce fish are bid up and fish in oversupply cannot be kept fresh.

Local Fish Markets

Not all fish caught in a commercial fishing area reach wholesale markets, such as those existing in Chicago, New York, or St. Louis. A significant percentage of commercially harvested fish is marketed through local retail fish markets.

The volume of fish that each firm handles depends on the original purpose underlying the creation of the market. Some local retail fish markets are organized to market fish lots too small to be shipped to a large wholesale market, such as Chicago or New York. Some are organized to supply tourist trade in an area where a particular species of fish is harvested. Others are organized by individual fishermen and are used as a means of diversifying their business enterprises. These usually operate on a part-time basis. They sell fresh or smoked fish in small backyard markets. There are also a few full-time retailers of fresh fish and fish products organized to handle a wide variety of fish who generally do not limit their stock of fresh fish to the particular species caught in their area.

These firms will sometimes have processing facilities to handle those fish that come into the market directly from the producer.

Interviews with a few of these full-time retailers indicated that the processed forms of fish in demand today are considerably different from those of five or six years ago. Consumers demand fish that are scaled and headed; they are also willing to pay considerably more (per pound) for a fillet even though the fillet may not possess the quality (taste) that fish marketed in the round possess. Montana fishermen reported that all their fish were shipped fresh; carp and suckers in the round, goldeye gutted, and buffalofish either gutted or fleeced. To the best of their knowledge it was all sold fresh at retail outlets except for carp shipped to trout farmers for use as trout food.

The Winnipeg Market

The wholesale market for goldeye is for the most part located in Winnipeg, Manitoba, Canada. Although their demand for goldeye has in the past been largely satisfied by the Manitoba harvest, the supply area has expanded to various states in the central part of the United States. Data on prices paid to fishermen were not available because records of these prices were not kept by the Canadian Department of Fisheries. Information that was available indicated that retail prices on the Winnipeg market ranged from \$1.50 to \$1.95 per pound.

The major portion of the goldeye harvest sold in the Winnipeg wholesale market is dressed, smoked, and sold on the retail market. Each processor-wholesaler of goldeye has specialized customers for his product. Some retail outlets require 9 to 10 ounce smoked goldeyes, whereas others require a much larger finished product (12 or 13 ounces). Prices paid to fishermen on the wholesale market are very dependent on the quality and size of fish that the particular retail outlets are demanding during that particular week or month of the year. The major retail outlets for goldeye are restaurants and railroad dining cars. During the past two years supply has exceeded the demand for goldeye at current prices. Wholesalers of smoked goldeye have been attempting to expand their retail market outlets because of optimism concerning the future supply of goldeye.

Many Canadians know of smoked goldeye and hold it in high regard as a delicacy, even to the extent that some prefer goldeye, when properly prepared, to steak. Thus there exists a small but ready market that needs only to be exploited. Either fresh or smoked goldeye can be shipped into Canada subject to a duty of ½ cent per pound. Fish are exempt from the sales tax; they must be in good condition and in addition, it should be noted that no fish may be imported into Canada unless they have been consigned to a Canadian broker. Thus it is not possible to drive a truckload of fish to Winnipeg in the hope of finding a buyer after arrival; arrangements must be made beforehand.

It can be seen that the organized markets for Montana fish species are centered in Chicago, Winnipeg, and major west coast cities. Fishermen selling in these markets are subject not only to fluctuating demand and prices, but also to unethical treatment by middlemen. As a consequence, Montana fishermen have diverted as much as possible of their catch around these markets and direct to retail outlets. Because of legal requirements this diversion does not appear feasible in the case of goldeye shipped to Canada.

Survey of Buyers' Attitudes Toward Montana Fish

Between July 25 and August 13, 1968, fourteen interviews in depth were conducted with freshwater fish buyers in Chicago, Illinois and Los Angeles, California. Three leading retailers and four important brokers, or wholesalers, were interviewed in each of these cities. The interviews were conducted by a professional interviewer with extensive experience in market research and psycho-social investigations.

Summary of Chief Findings and Impressions

1. Most of the retail and wholesale buyers interviewed in this study purchased a wide variety of fish and seafoods among which freshwater varieties constituted, at most, less than 10 percent of their total volume and probably an even smaller percentage of their total profits. They displayed a commensurate low degree of

interest in, and knowledge about, the subject of freshwater fish.

2. All of these men regarded buffalofish, carp, and suckers as relatively low-priced, low-quality species. The chief factor behind their negative assessment seemed related to the species' mode of eating. These fishes' reputation as "bottom feeders" seemed to evoke unpleasant connotations of their ingesting "debris" and "filth" from "polluted waters."

3. Carp and suckers were primarily regarded as fish "for the kosher trade," the members of which were said to want fresh whole or gutted large-sized types for gefüllte fish. It was thought that the most important type of retail outlet consisted of small independent stores that catered to the Jewish trade. This market was viewed as extremely busy "during the two holiday seasons," at which time most of the dealers interviewed reported carrying at least a few of these species "to accommodate our Jewish customers." The year-around market for these fish was, on the other hand, viewed as declining—or at least changing from one for wholesalers to one for processors—due to the rapid growth in usage of prepared gefüllte fish.

4. Buffalofish were primarily regarded as fish for "the colored market," with a few going to "Southern whites" and Jews. Negroes were thought to prefer to buy their buffalofish fresh, dressed, headless, scaled, and sliced for frying. Though buyers did not think buffalofish was "a good enough fish" to promote for sale to other groups of consumers, they were in general agreement that the demand for buffalofish exceeded the current supply and showed no signs of declining. Most of the wholesalers carried it from time to time. However, the bulk of the supply in both cities seemed to be handled by a small number of wholesalers who specialized in "Southern" or "freshwater" fish of "that type."

5. These buyers, who were most experienced in purchasing buffalofish, considered Louisiana buffalofish to be far more satisfactory than buffalofish from Montana. They reported that the Southern consumers preferred the "fatter, richer" Louisiana fish to its leaner counterpart from Montana and were, therefore, willing to pay more for the fish from Louisiana. More im-

portant, they complained—to a man—that Montana buffalofish were not adequately dressed or graded, were not iced properly for transport, were not shipped regularly, and/or arrived in poor quality.

6. Almost two-thirds of the respondents had never purchased fish from Montana because, "nobody ever tried to sell me any." They were not aware of what types of fish products Montana suppliers might have to offer and were open-minded on the subject. That is, they had no strong predispositions to view Montana fish either positively or negatively and were inclined to suppose that fish from this state would be "up to standard" and "competitively priced" unless and until they found out differently.

7. The type of fish which buyers most frequently associated with "the Rocky Mountain states" was brook trout from Idaho or Utah. Almost all of the interviewees had purchased this fish and were very pleased with its quality, flavor, and rapid transport. They reacted positively to the idea of frozen trout from Montana, although a few thought that Rocky Mountain trout was too high-priced in comparison to that from Denmark and Japan.

8. Respondents did not react favorably to the idea of buffalofish, carp, and suckers in processed forms such as sausage, fish sticks, portions, or fillets. Their major objections were that these fish were "to bony" to process and not sufficiently flavorful, tender, or familiar to consumers to have much appeal outside of Negro ghettos.

9. Few of the buyers were familiar with gold-eye or with the smoked fish market in general. They advised contacting smoked fish processors for assessment of the potential for smoked gold-eye from Montana.

Alternative Uses for Montana Fish

Past and present attempts at commercial use of Montana fish have not been outstandingly successful. Buffalofish, with a sales value exceeding \$50,000 was the most important Montana species in 1967. Too few catfish were caught to have any economic significance, and the price—2 cents per pound—was too low to

make carp, suckers, and sheepshead important. Goldeye are a potentially valuable species, but the 1967 sales of the one individual fishing for them were only \$15,613 so he did not fish at all in 1968.

Using Montana Fish and Game Department minimum estimates as a basis, the future for buffalofish looks moderately promising with a minimum sustained yield estimate of 1,250,000 pounds annually. If Montana fishermen could sell this quantity for the present price of 20 cents per pound, sales would be \$250,000. The error in this sort of projection lies in the price/quantity relationship. The bulk of buffalofish is now being sold fleeced, directly to west coast retailers by the fishermen. By selling in this way, fishermen are receiving payment not only for the fish but for some processing and for performing the wholesaling function as well. In midwest wholesale markets, a substantially lower price would be realized and costs would be reduced slightly. Of course, transportation costs of some 8 cents per pound must be subtracted from these prices to determine the price the Montana fishermen would receive. As an example, if the Montana fishermen sold Number 1 fish at 16 cents per pound and then subtracted the transportation cost, he would receive a net price of 8 cents per pound. If 1,250,000 pounds were sold, net sales would be \$100,000. In view of both quantity and price, buffalofish remains the Montana commercial species with the greatest fresh fish potential.

Sustained yield estimates for goldeye are especially hazardous because so little is known about this species in Montana waters. If 500,000 pounds annually could be caught by experienced fishermen and the current average price of 25 cents per pound is accepted, the market potential for this fish would reach \$125,000. The evidence suggests that 500,000 pounds of Montana fish could not be absorbed by the Winnipeg market without serious results to the goldeye price structure. Montana fish must compete in this market not only with Canadian fish, but also with fish from several midwestern states. In time, the Canadian demand might be expanded, but other market expansion efforts are very costly and risky.

The minimum sustained yield estimate of 4,250,000 pounds of carp and suckers would probably stagger the imaginations of most Mon-

tanans. However, when the price received by the fishermen is only 2 cents per pound, this quantity of fish represents only \$85,000 of gross revenue, hardly enough to start an economic revival.

In an effort to find higher-value uses for these low-priced fish, several other intermediate and end products were considered and investigated. These products were divided into two broad categories—those for human consumption and all others lumped together as industrial.

Two products considered possible at the beginning of this study were rejected because interviews with people in the trade indicated a belief in strong consumer resistance. The first of these products was fish sausage, which has been tried and failed to sell well in this country. The second was smoked fish, which was in considerable consumer disfavor following several deaths due to botulism poisoning traced to smoked Great Lakes fish.

Fish flour in various forms has been produced and consumed by inhabitants of several Asian countries for centuries. However, it has only been within the last few years that a process has been developed which results in an odorless and tasteless product supposedly adaptable to existing diets. This process, developed by the U.S. Bureau of Commercial Fisheries, is the only one at present that has U.S. Food and Drug Administration approval; and it marks a significant step forward in the production of a palatable fish flour.

The process must be conducted under carefully controlled conditions in order to comply with rather exacting FDA specifications and standards. The FPC must be made from "whole, wholesome hake and hakelike species handled expeditiously and under sanitary conditions. . . ." Preliminary information suggests that FPC can be produced in the United States for a cost to the consumer of about 24 cents per pound, based on a fish to flour conversion ratio of 6 to 1. Yet even made from fish worth only 2 cents per pound, FPC costs from two to three times as much as other protein concentrates, such as that derived from oil seed, when calculated on a per unit of protein basis.

It is fairly obvious that Montana's capacity to compete with marine fisheries in the production of FPC is almost nonexistent. The large scale of operations presumably necessary for

efficient production will utilize whole fish at a rate simply unavailable from Montana waters—the experimental plant being built by the Bureau of Commercial Fisheries will be able to process 50 tons of raw fish every 24 hours.

Despite the increasing demand for fish as a basic ingredient of pet foods, there is little chance that a viable pet food plant could be established in Montana; the limited supply of fish precludes operations on a scale comparable to pet food plants on marine coasts. For instance, pet food plants along the coast of the Gulf of Mexico require 6,000 to 7,500 tons of fish per year, and since these are trash fish, caught incidental to the main operation of a fishing vessel, they can be harvested and sold for no more than 1 cent per pound, which is only one-half the price necessary to provide Montana fishermen with a subsistence income. This low price also makes it impossible to deliver Montana fish to marine coast plants at competitive rates.

Since the most common and valuable use of industrial fish is in the production of fish meal, oil, and solubles, a seemingly obvious way of utilizing Montana fish is the reduction process, but there too, economic conditions in the industry appear to relegate Montana fisheries to a noncompetitive position.

The production of fish meal has been carried on for centuries. Originally the fish were laid out in the sun to dry before being ground, by mortar and pestle devices, into meal—a method still employed in some underdeveloped countries. Today gigantic plants are in operation throughout the world which use fairly complicated processes and machinery. Recent low prices and the relatively small volume of fish available from Montana waters are major barriers to the establishment of a fish meal industry in the state. It appears that a fish meal plant is economically unfeasible in the state of Montana.

Summary and Conclusions

The small amount of commercial fishing in Montana has occurred since the building of artificial reservoirs in the Missouri River system. Several early attempts to establish a commercial fishery failed, but now there are three

fishing enterprises at work in the state. Two of these have survived a number of years and appear to be rather permanent. The third is still in the formative stage and may—or may not—continue. Sales of fishery products have fluctuated over the years with a long-term upward trend. In 1967 sales of 1,275,000 pounds of fish resulted in \$90,000 of gross receipts to the fishermen.

Per capita fish consumption has remained almost constant for many years. Total demand has grown only as fast as population. During recent years, there has been a steady trend of consumer demand away from "fish" and toward shellfish. Accompanying this trend there has been an increase in the consumption of imports (especially shrimp) and a decrease in the consumption of domestic fish. Housewives are turning with increasing frequency to the purchase of convenience foods—frozen and breaded fish, fish sticks, and shrimp—and away from foods requiring home preparation. All these trends are working against the type of inexpensive fish produced in Montana waters—especially carp, buffalofish and suckers.

These Montana species are further handicapped by a popular belief—shared by Montana consumers and Chicago and Los Angeles wholesalers and retailers—that they are dirty, coarse, muddy tasting, and bony.

At present the principal demand for carp, buffalofish, and suckers is in two ethnic markets. Low-income Negroes and some whites from the south purchase buffalofish when they are able and carp or suckers at other times. Buffalofish is not cheap, retailing sometimes at 59 cents per pound, so the much less expensive carp and suckers are sometimes purchased. It can be expected that as these groups are more fully absorbed into urban, industrial society, their tastes and purchasing power will more closely resemble the broader mass market and, as a result, demand for these species will decrease further.

Carp and suckers are also purchased for use in traditional Jewish foods eaten during religious holiday periods. In years past—and to some extent today—these species were bought fresh, or in some cases alive, and prepared in the home. All reports indicate that in this market, too, convenience is becoming of major importance and few younger women are preparing

these holiday dishes at home. If Montana fishermen wish to hold some share of this market, it will be necessary to do so by selling to commercial producers of Jewish foods.

Goldeye is sold exclusively in Canada and is considered a very choice food item in the Canadian market. On hotel and restaurant menus, it rivals tenderloin steak and lobster tails in price. There should continue to be a small, but steady demand for this fish for many years to come.

From all accounts, Montana fish find acceptance in the market only when similar species from other sources are not available in adequate quantity. Buyers prefer Louisiana buffalofish and Canadian goldeye. Montana carp are small and, because of high transportation cost and low value, are seldom shipped east.

A number of products not now manufactured in the state were evaluated to determine the economic feasibility of production. Results were generally negative. Industrial products such as fish meal, fish oil, pet food, and FPC (fish flour) were found to require large plants using far more fish than Montana could produce. In these products Montana would be competing

with marine trash fish and offal selling for as little as ½ cent per pound. Those plants processing marine fish would have the further advantages of cheaper water transportation and large consumer markets nearby.

From the foregoing, it can be concluded that Montana is a very minor producer of several species of fish enjoying a severely limited market. Montana fishermen are at a competitive disadvantage because of their distance from market and the fish species available to them.

Within the foreseeable future, there will be a continuing demand for limited quantities of Montana fish. This demand can best be served by "poor boy" operations of the present type which do not require a large capital investment and therefore do not have high fixed costs. Preliminary processing should be encouraged so that specialized retail markets can be served and higher prices obtained. The practice of selling direct to retail outlets also permits the fisherman-processor to reduce the problems of dealing with frequently unethical wholesalers in principal markets by performing the wholesale operations themselves.

ROBERT D. SHRINER

Technology, Change, and the Learning Process

Technergistics Provides an Excellent Vehicle for Utilizing Continually Changing Knowledge

When the inventor of the wheel led his wife out of her cave into that prehistoric clearing to look over his latest creation, I suspect that she was able to grasp the concept of his invention almost immediately (although not all the possible uses for it). It was only a short mental step from the "common knowledge" she used in running her cavehome to the "technological frontier" embodied in that prehistoric invention. With little or no special effort, she understood the principle of the wheel well enough to put it to use.

An eon or two later Marco Polo was able to understand the principles of gunpowder manufacture well enough to transport the Chinese technology back to Europe. Though relatively complex, the process was still within the grasp of many palace armorers; and the use of explosives quickly revolutionized warfare and politics in Europe and the Middle East.

The distance between common knowledge and the technological frontier — "comprehension gap"—was growing but it still was narrow enough to be bridged by a relatively small amount of study by an educated layman.

Today the comprehension gap has grown so wide that even a well-educated person finds it almost impossible to understand the complex principles of new technological advances outside

his specialty unless he devotes much time and effort to the matter. Even the advances within his own field often require considerable study before he understands them well enough to put them to use.

The very process by which technology is created has itself changed. Modern technology is less and less the product of serendipity and increasingly the product of painstaking research and development—carefully planned, organized, managed, and evaluated by highly-trained specialists.

Technology is no longer created largely by educated laymen-inventors; it is produced by highly-trained scientific specialists experienced in research and development. Advances in technology are no longer readily understandable to the average individual; often they are not even understandable to the trained specialist except after much intensive study.

The "technology explosion" with its very rapid development of new and different ways of doing things has become widely recognized and widely publicized. An equally significant change has occurred, however, in the relationship between the knowledge possessed by the average layman and the knowledge required to fully understand new developments in technology. This latter change—this comprehension

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gap—seems almost to have been overlooked until now; at least it has not been given adequate attention.

In the past (say, prior to 1850) it was generally expected that an intelligent "gentleman"—the equivalent of today's educated layman—could acquire a reasonably clear working knowledge of most, if not all, new inventions by devoting no more than a few months' study to each. Such familiarity with new technology is no longer possible. Today a broader span of knowledge must be encompassed. The rate of technological change and the degree of complexity of each new development have both increased greatly.

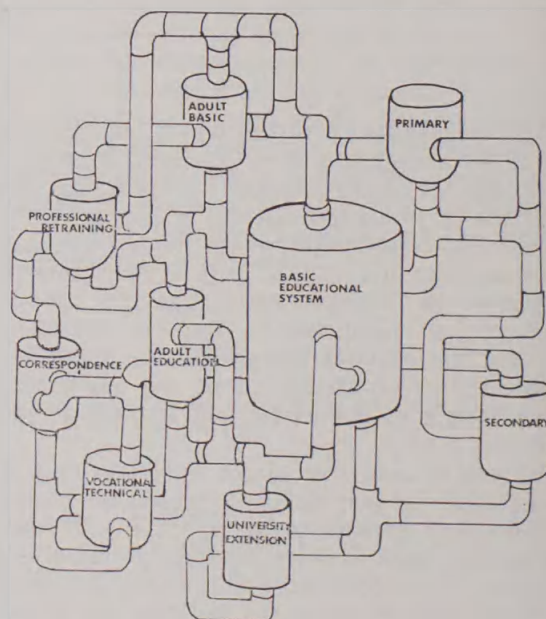
Together, these changes have made it increasingly difficult, if not totally impossible, to maintain today the level of widespread intimate familiarity with the content of technology which was possible earlier.

Increasingly, we are becoming captives of a complicated world of complex gadgetry which we soon discover we are unable to do without. Our social concepts, our education system, and even our religion have given us a set of presumably *ultimate* values and supposedly *unchanging* facts, rather than an understanding of the concept of *process*, with which to cope with a state of almost continuous change. Our growing frustration, both as individuals and as a society, with a system which continues to produce at a high rate a technology which we neither understand nor are fully able to employ provides more than adequate proof of the need for measures capable of dealing with the increasing complexity of new technology and the increasingly rapid outdated of existing knowledge of almost every field.

What is needed is a comprehensive, systematic process for (a) preparing for change, (b) perceiving and understanding change and new knowledge as they emerge, and (c) putting new knowledge to work in an orderly and unfrightening way. No such process exists today in organized form.

Although individual educators and researchers are touching on many different aspects of the total problem, their efforts are much like the legendary blind men with the elephant—they do not provide an adequate composite view. Moreover, no attempt is being made to coordinate these efforts into what might be called a

total system approach or to provide an overall sense of common purpose and direction for the work being done. As illustrated, our efforts to date have been divided among many fields—general education, adult education, special education, university extension, vocational and technical training, professional training, refresher training, retraining, vocational rehabilitation, technology transfer, technology utilization, technology diffusion, information dissemination, and information analysis and distribution, to name only a few. Our efforts have not been coordinated into a total system for the transfer of knowledge.



Although a great deal is known about the mechanics of transferring knowledge in the multitude of special fields referred to earlier, there is little to guide development of a comprehensive system. Past research has concentrated on improving the effectiveness of individual fields and techniques but has given relatively little attention to the question of how these individual fields and techniques could and should be coordinated most effectively. Academic arguments concerning the supposed differences between "education" and "training," for example, illustrate the absence of common

overall purpose which has prevailed. Let me give some other examples of the problems in our present education or knowledge transfer system.

The "Certified Knowledge Innoculation" Syndrome

Immunization Against Ignorance. Our present education system is based largely on the premise that a single injection of knowledge received early in life, if large enough and of the proper type, permanently inoculates an individual against the hazards of ignorance. Moreover, like the scar that indicates his vaccination against smallpox, the individual is expected to carry through life some written certification of his inoculation, with an estimate of its effectiveness.

Anachronisms and Appendages. In an earlier period when change occurred at a more leisurely rate and when life expectancy was half what it is today, such a system was considerably more appropriate than it seems to be today. However, because the basic system has become visibly inadequate in the years since its beginnings, special appendages—some good and well-conceived, others less so—have been added from time to time in an effort to correct these inadequacies enough to keep the system running. These appendages (e.g., vocational and technical training, adult education, extension services, etc.), in turn, have typically gained their own specialized modifications without reference to the basic system, until the resulting conglomeration has come to look as the school system does today. In many cases, the new appendages have retained many of the biases, ceremonies, and formalities of the original system without particular regard for their real usefulness (or lack thereof).

Certification. As a society, we generally refuse to accept an individual as properly educated unless he can present official certification, regardless of his demonstrated achievements; and we provide scant opportunity for obtaining official certification other than through the traditional "knowledge inoculation" system. Diplomas and degrees supposedly certify a minimum level of useful knowledge acquired in an acceptable educational experience. Entry into advanced

programs commonly depends upon presentation of certificates of accomplishments many years past which may have little present relevance. Therefore, educational opportunities which do not provide acceptable certification are frequently avoided, regardless of their actual merit.

Superior and Inferior Knowledge. Like certification, status distinctions among different types of educational experiences frequently make it difficult for individuals to move freely between educational channels without incurring some penalty. At the high school level, a college preparatory program is "better" than a vocational-technical program. At the college level, full-time enrollment on the main campus in day-time classes is "better" than part-time enrollment, night classes, or off-campus work; the latter may not even be considered acceptable for academic credit at some institutions, although this rigid barrier is giving way. University faculties place a premium value on theoretical knowledge; almost everybody else places a premium value on practical knowledge.

True-False Knowledge. Heavy emphasis is placed on the learning of "facts"—the date of Napoleon's birth, the atomic weight of helium, the principles of economics, etc.—rather than on the search, analysis, and decision processes by which information may be gathered and evaluated. Hence, individuals find it difficult to adjust when old facts have to be replaced by new facts (e.g., when the concept that air and water are free goods has to be replaced by the idea that *somebody* has to pay the cost of keeping air and water clean enough to use).

Compartmentalized Knowledge. The need for specialization of work has led to a common belief that knowledge and skills *should* be divided into areas with precise boundaries. With only rare exceptions, English literature classes do not read science books. History reports are not evaluated on the basis of how well- or poorly-written they may be. Fine Art students do not have to understand mathematics. Engineers are not expected to write clearly or to understand literature, poetry, or music. High school students in a college preparatory program are expected *not* to take vocational classes, and vice versa. The result is another impediment to adjustment and adaptability.

The Sins of "Apparent Ignorance" and "Outside Help." These side effects of the emphasis on certification are created largely by the traditions of the academic grading system: An individual must never appear not to understand and, even if he does not understand, he must not let his lack of understanding be known and must do all his work without assistance. Instilled early in the school system, such an attitude commonly haunts the process of adjustment and change for the individual years, even decades, later. He is reluctant to have others comment on his work or to make suggestions. He is ashamed to admit that he does not understand, even when the problem is of great complexity. He is afraid to ask for help.

The preceding comments are not intended to be a blanket condemnation of the present education structure; nor are they an exhaustive list of its faults. They are merely a few of the more obvious incongruities in the present structure which seem to work at cross-purpose to the real objectives the system is supposed to pursue—*creation of the ability to function productively and relatively comfortably as a part of society.*

Since the present structure was conceived in an era when society was characterized more by stability than by change, it is not surprising that such incongruities exist. Their existence merely underscores the need for a comprehensive reappraisal of both the operational objectives and the actual workings of our knowledge transfer structure in terms not of a single injection of knowledge but of an unending, life-long replenishment process.

Technergistics—A New Approach

Having, I hope, established the need for more comprehensive unified approaches to the transfer of knowledge, let me now propose a new field of study to conceive, investigate, and implement such new, systematic, coordinated approaches.

Because our efforts to date have been divided among many fields and specialties rather than coordinated into a total system for the transfer of knowledge, we do not yet even have a word for such a system. For the sake of making further discussion less awkward, then, let me introduce some words newly-coined for this purpose.

Let us call the system or process *technergism*;

let us say that its nature is *technergistic* and that its result is *technergy*. The essence of these words stems from the concept of "putting ideas to work" (*techno* + *ergon*). With these new basic terms to build upon, let us call our new field of study *technergistics*.

I propose this new name because there are, unfortunately, many people who have come to look with condescension upon the term "education" and upon those who call themselves "educators." Perhaps a new name to go with a new function will unshackle the new function from its unfortunate baggage of past associations and mental skeletons. For those who prefer to retain the old name and, perhaps, even the old accoutrements while undertaking the new direction; let me be the first to wish you lots of luck! I have no objection to calling the process any name you prefer—just as long as the job of conceiving, investigating, and implementing systematic and coordinated efforts is gotten underway—without delay.

Let me illustrate very quickly and very briefly the type of results I would expect from this new field I have proposed. I will outline what I would consider to be a *technergistic* subsystem for the secondary level which should *at least* be tested . . . and to my knowledge, it has not. The ingredients of this *technergistic* subsystem are not new or original. I have freely "borrowed" many people's ideas. However, as best I can determine, the combination of these individual ideas has created a new and more comprehensive idea—it is the combination of existing detailed knowledge into a comprehensive and integrated approach which distinguishes *technergistics* from other more limited approaches to knowledge transfer.

In place of the usual array of course subjects divided into yearly increments, a *technergistic* secondary curriculum might have only three subject areas—Communication Skills, Decision Skills, and Applied Skills—with little significance given to time phasing (class ranks) or to conventional grading.

The study of Communication Skills would encompass all aspects of communications from the traditional areas of language, reading and writing, literature, composition, journalism, poetry, and drama . . . to the oft-omitted areas such as advertising, cinema, TV, radio, history, science, government, philosophy, etc. The ob-

jective would be to learn the effective use of communication skills, regardless of the context. A study of persuasion, for example, might include materials from poetry, advertising, philosophy, cinema, history, art, business correspondence, and politics.

The study of Decision Skills would, in general, encompass all aspects of what we call "science"—the collection, organization, analysis, and evaluation of information. The objective would be to develop skill in assembling relevant information from all possible sources and in applying appropriate theory and tools (i.e., mathematics, measuring devices, computers, etc.) to the analysis of that information. Instruction would be through team solution of complex case problems, with each team composed of students of differing age, skill, and experience. Use of the team technique would allow older, more experienced students to help instruct younger, less experienced, or less skilled students. Multiteam assignments would create group-level competition. The American Association for the Advancement of Science (AAAS) has evolved a somewhat similar curriculum for science called "Science: A Process Approach."

Applied Skills, though closely allied with work in the Decision Skills, would be structured to permit both greater specialization and vocational orientation. The objective would be to develop a working knowledge of some field of vocational activity. Specialization within such broad areas as health science skills, mechanical skills, electrical skills, and conceptual skills would be encouraged, while interspecialty transfer would be made relatively easy to permit student experimentation in different fields. Study activities would include, for example, maintenance of devices used in Decision Skills and in Communication Skills, participation in community service projects, and actual outside employment.

An obvious result of such a program would be that every student would receive both a

comprehensive "academic" background and a minimum amount of vocationally-useful experience. Although there would be no so-called "elective" courses, each student would have the opportunity to devote greater time and effort to those things which interest him most within each area while, at the same time, developing a well-rounded background in each area. Use of team study in a continuous program without apparent advancement increments or grades (except for designation as team leader, which should eventually occur to each student) would tend to eliminate individual student "failures," plus the fear, frustration, dishonesty, and "drop-outs" that are usually associated with traditional academic failure. Productivity, creativity, and adaptability—not grades or fact retention—would likely become the goals of the students; each would be able to progress as rapidly or as slowly, as little or as far, as his own capability, interest, and motivation allowed. Change and creative adaptation to change would become accepted as normal. The students exposed to such a program would in all likelihood, find little to disturb them in more futuristic systems which might be developed later.

A Final Comment

The new directions I have outlined very briefly here provide only the barest glimpse of what is possible. Whether these and other possibilities ever become realities, however, depends on many things, not the least of which is the present system's ability to repel change. There are obvious and substantial costs involved in abandoning, or even in merely changing our existing structures for knowledge transfer; but large as those costs are, they seem small in proportion to the cost of not changing. Knowledge will continue to advance and we must adapt in order to keep pace. Technergistics provides a workable means for us to adapt.

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