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CHARLES T. MUNGER

The Great Financial Scandal of 2003
(An Account by Charles T. Munger)

The great financial scandal erupted in 2003 with the sudden, deserved disgrace of Quant Technical Corporation, always called “Quant Tech”. By this time Quant Tech was the country’s largest pure engineering firm, having become so as a consequence of the contributions of its legendary founder, engineer Albert Berzog Quant.

After 2003, people came to see the Quant Tech story as a sort of morality play, divided into two acts. Act One, the era of the great founding engineer, was seen as a golden age of sound values. Act Two, the era of the founder’s immediate successors, was seen as the age of false values with Quant Tech becoming, in the end, a sort of latter day Sodom or Gomorrah.

In fact, as this account will make clear, the change from good to evil did not occur all at once when Quant Tech’s founder died in 1982. Much good continued after 1982, and serious evil had existed for many years prior to 1982 in the financial culture in which Quant Tech had to operate.

The Quant Tech story is best understood as a classic sort of tragedy in which a single flaw is inexorably punished by remorseless Fate. The flaw was the country’s amazingly peculiar accounting treatment for employee stock options. The victims were Quant Tech and its country. The history of the Great Financial Scandal, as it actually happened, could have been written by Sophocles.

As his life ended in 1982, Albert Berzog Quant delivered to his successors and his Maker a wonderfully prosperous and useful company. The sole business of Quant Tech was designing, for fees, all over the world, a novel type of super-clean and super-efficient small power plant that improved electricity generation.

By 1982 Quant Tech had a dominant market share in its business and was earning $100 million on revenues of $1 billion. It’s costs were virtually all costs to compensate technical employees engaged in design work. Direct employee compensation cost amounted to 70% of revenues. Of this 70%, 30% was base salaries and 40% was incentive bonuses being paid out under an elaborate system designed by the founder. All compensation was paid in cash. There were no stock options because the old man had considered the accounting treatment required for stock options to be “weak, corrupt and contemptible,” and he no more wanted bad accounting in his business than he wanted bad engineering. Moreover, the old man believed in tailoring his huge incentive bonuses to precise performance standards established for individuals or small groups, instead of allowing what he considered undesirable compensation outcomes, both high and low, such as he believed occurred under other companies’ stock option plans.

Yet, even under the old man’s system, most of Quant Tech’s devoted longtime employees were becoming rich, or sure to get rich. This was happening because the employees were buying Quant Tech stock in the market, just like non-employee shareholders. The old man had always figured that people smart enough, and self-disciplined enough, to design power plants could reasonably be expected to take care of their own financial affairs in this way. He would sometimes advise an employee to buy Quant Tech stock, but more paternalistic than that he would not become.

By the time the founder died in 1982, Quant Tech was debt free and, except as a reputation-enhancer, really didn't need any shareholders' equity to run its business, no matter how fast revenues grew. However, the old man believed with Ben Franklin that "it is hard for an empty sack to stand upright," and he wanted Quant Tech to stand upright. Moreover, he loved his business and his coworkers and always wanted to have on hand large amounts of cash equivalents so as to be able to maximize work-out or work-up chances if an unexpected adversity or opportunity came along. And so in 1982 Quant Tech had on hand $500 million in cash equivalents, amounting to 50% of revenues.

Possessing a strong balance sheet and a productive culture and also holding a critical mass of expertise in a rapidly changing and rapidly growing business, Quant Tech, using the old man's methods, by 1982 was destined for 20 years ahead to maintain profits at 10% of revenues while revenues increased at 20% per year. After this 20 years, commencing in 2003, Quant Tech's profit margin would hold for a very long time at 10% while revenue growth would slow down to 4% per year. But no one at Quant Tech knew precisely when its inevitable period of slow revenue growth would begin.

The old man's dividend policy for Quant Tech was simplicity itself: He never paid a dividend. Instead, all earnings simply piled up in cash equivalents.

Every truly sophisticated investor in common stocks could see that the stock of cash-rich Quant Tech provided a splendid investment opportunity in 1982 when it sold at a mere 15 times earnings and, despite its brilliant prospects, had a market capitalization of only $1.5 billion. This low market capitalization, despite brilliant prospects, existed in 1982 because other wonderful common stocks were also then selling at 15 times earnings, or less, as a natural consequence of high interest rates then prevailing plus disappointing investment returns that had occurred over many previous years for holders of typical diversified portfolios of common stocks.

One result of Quant Tech's low market capitalization in 1982 was that it made Quant Tech's directors uneasy and dissatisfied right after the old man's death. A wiser board would then have bought in Quant Tech's stock very aggressively, using up all cash on hand and also borrowing funds to use in the same way. However, such a decision was not in accord with conventional corporate wisdom in 1982. And so the directors made a conventional decision. They recruited a new CEO and CFO from outside Quant Tech, in particular from a company that then had a conventional stock option plan for employees and also possessed a market capitalization at 20 times reported earnings, even though its balance sheet was weaker than Quant Tech's and its earnings were growing more slowly than earnings at Quant Tech. Incident to the recruitment of the new executives, it was made plain that Quant Tech's directors wanted a higher market capitalization, as soon as feasible.

The newly installed Quant Tech officers quickly realized that the company could not wisely either drive its revenues up at an annual rate higher than the rate in place or increase Quant Tech profit margin. The founder had plainly achieved an optimum in each case. Nor did the new officers dare tinker with an engineering culture that was working so well. Therefore, the new officers were attracted to employing what they called "modern financial engineering" which required prompt use of any and all arguably lawful methods for driving up reported earnings, with big, simple changes to be made first.

By a strange irony of fate, the accounting convention for stock options that had so displeased Quant Tech's founder now made the new officers' job very easy and would ultimately ruin Quant Tech's reputation. There was now an accounting convention in the United States that, provided employees were first given options, required that when easily marketable stock was issued to employees at a below-market price, the bargain element for the employees, although roughly equivalent to cash, could not count as compensation expense in determining a company's reported profits. This amazingly peculiar accounting convention had been selected by the accounting profession, over the objection of some of its wisest and most ethical members, because corporate managers, by and large, preferred that their gains from exercising options covering their employers' stock not be counted as expense in determining their employers' earnings. The accounting profession, in making its amazingly peculiar decision, had simply followed the injunction so often followed by persons quite different from prosperous, entrenched accountants. The injunction was that normally followed by insecure and powerless people: "His bread I eat, his song I sing." Fortunately, the income tax authorities did not have the same amazingly peculiar accounting idea as the accounting profession. Elementary common sense prevailed, and the bargain element in stock option exercises was treated as an obvious compensation expense, deductible in determining income for tax purposes.

Quant Tech's new officers, financially shrewd as they were, could see at a glance that , given the amazingly peculiar accounting convention and the sound income-tax rules in place, Quant Tech had a breathtakingly large opportunity to increase its reported profits by taking very simple action. The fact that so large a share of Quant Tech's annual expense was incentive bonus expense provided a "modern financial engineering" opportunity second to none.

For instance, it was mere child's play for the executives to realize that if in 1982 Quant Tech had substituted employee stock option exercise profits for all its incentive bonus expense of $400 million, while using bonus money saved, plus option prices paid, to buy back all shares issued in option exercises and keeping all else the same, the result would have been to drive Quant Tech 1982 reported earnings up by 400% to $500 million from $100 million while shares outstanding remained exactly the same! And so it seemed that the obviously correct ploy for the officers was to start substituting employee stock option exercise profits for incentive bonuses. Why should a group of numerate engineers care whether their bonuses were in cash of virtually perfect equivalents of cash? Arranging such substitutions, on any schedule desired, seemed like no difficult chore.

However, it was also mere child's play for the new officers to realize that a certain amount of caution and restraint would be desirable in pushing their new ploy. Obviously, if they pushed their new ploy too hard in any single year there might be rebellion from Quant Tech's accountants or undesirable hostility from other sources. This, in turn, would risk killing a goose with a vast ability to deliver golden eggs, at least to the officers. After all, it was quite clear that their ploy would be increasing reported earnings only by adding to real earnings an element of phony earnings – phony in the sense that Quant Tech would enjoy no true favorable economic effect (except temporary fraud-type effect similar to that from overcounting closing inventory) from that part of reported earnings increases attributable to use of the ploy. The new CEO privately called the desirable, cautious approach "wisely restrained falsehood".

Plainly, the new officers saw, it would be prudent to shift bonus payments to employee stock option exercise profits in only a moderate amount per year over many years ahead. They privately called the prudent plan they adopted their "dollop by dollop system" which they believed had four obvious advantages:

> <u>First</u>, a moderate dollop of phony earnings in any single year would be less likely to be noticed than a large dollop.
>
> <u>Second</u>, the large long-term effect from accumulating many moderate dollops of phony earnings over the years would also tend to be obscured in the "dollop by dollop system." As the CFO pithily and privately said: "If we mix only a moderate minority share of turds with the raisins each year, probably no one will recognize what will ultimately become a very large collection of turds."
>
> <u>Third</u>, the outside accountants, once they had blessed a few financial statements containing earnings increases only a minority share of which were phony, would probably find it unendurably embarrassing not to bless new financial statements containing only the same phony proportion of reported earnings increase.
>
> <u>Fourth</u>, the "dollop by dollop system" would tend to prevent disgrace, or something more seriously harmful, for Quant Tech's officers. With virtually all corporations except Quant Tech having ever-more-liberal stock option plans, the officers could always explain that a moderate dollop of shift toward compensation in option-exercise form was needed to help attract or retain employees. Indeed, given corporate culture and stock market enthusiasm likely to exist as a consequence of the strange accounting convention for stock options, this claim would often be true.

With these four advantages, the "dollop by dollop system" seemed so clearly desirable that it only remained for Quant Tech's officers to decide how big to make their annual dollops of phony earnings. This decision, too, turned out to be easy. The officers first decided upon three reasonable conditions they wanted satisfied:

> First, they wanted to be able to continue their "dollop by dollop system" without major discontinuities for 20 years.
>
> Second, they wanted Quant Tech's reported earnings to go up by roughly the same percentage each year throughout the whole 20 years because they believed that financial analysts, representing institutional investors, would value Quant Tech's stock higher if reported annual earnings growth never significantly varied.
>
> Third, to protect credibility for reported earnings, they never wanted to strain credulity of investors by reporting, even in their 20th year, that Quant Tech was earning more than 40% of revenues from designing power plants.

With these requirements, the math was easy, given the officers assumption that Quant Tech's non-phony earnings and revenues were both going to grow at 20% per year for 20 years. The officers quickly decided to use their "dollop by dollop system" to make Quant Tech's reported earnings increase by 28% per year instead of the 20% that would have been reported by the founder.

And so the great scheme of "modern financial engineering" went forward toward tragedy at Quant Tech. And few disreputable schemes of man have ever worked better in achieving what was attempted. Quant Tech's reported earnings, certified by its accountants, increased regularly at 28% per year. No one criticized Quant Tech's financial reporting except a few people widely regarded as impractical, overly theoretical, misanthropic cranks. It turned out that the founder's policy of never paying dividends, which was continued, greatly helped in preserving credibility for Quant Tech's reports that its earnings were rising steadily at 28% per year. With cash equivalents on hand so remarkably high, the Pavlovian mere-association effects that so often impair reality recognition served well to prevent detection of the phony element in reported earnings.

It was therefore natural, after the "dollop by dollop system" had been in place for a few years, for Quant Tech's officers to yearn to have Quant Tech's reported earnings per share keep going up at 28% per year while cash equivalents grew much faster than they were then growing. This turned out to be a snap. By this time, Quant Tech's stock was selling at a huge multiple of reported earnings, and the officers simply started causing some incremental stock-option exercises that were not matched either by reductions in cash bonuses paid or by repurchases of Quant Tech's stock. This change, the officers easily recognized, was a very helpful revision of their original plan. Not only was detection of the phony element in reported earnings made much more difficult as cash accumulation greatly accelerated, but also a significant amount of Ponzi-scheme or chain-letter effect was being introduced into Quant Tech, with real benefits for present shareholders, including the officers.

At this time the officers also fixed another flaw in their original plan. They saw that as Quant Tech's reported earnings, containing an increasing phony element, kept rising at 28%, Quant Tech's income taxes as a percentage of reported pre-tax earnings kept going lower and lower. This plainly increased chances for causing undesired questions and criticism. This problem was soon eliminated. Many power plants in foreign nations were built and owned by governments, and it proved easy to get some foreign governments to raise Quant Tech's design fees, provided that in each case slightly more than the fee increase was paid back in additional income taxes to the foreign government concerned.

Finally, for 2002, Quant Tech reported $16 billion in earnings on $47 billion of revenues that now included a lot more revenue from interest on cash equivalents than would have been present without net issuances of new stock over the years. Cash equivalents on hand now amounted to an astounding $85 billion, and somehow it didn't seem impossible to most investors that a company virtually drowning in so much cash could be earning the $16 billion it was reporting. The market capitalization of Quant Tech at its peak early in 2003 became $1.4 trillion, about 90 times earnings reported for 2002.

However, all man's desired geometric progressions, if a high rate of growth is chosen, at last come to grief on a finite earth. And the social system for man on earth is fair enough, eventually, that almost all massive cheating ends in disgrace. And in 2003 Quant Tech failed in both ways.

By 2003, Quant Tech's real earning power was growing at only 4% per year after sales growth had slowed to 4%. There was now no way for Quant Tech to escape causing a big disappointment for its shareholders, now largely consisting of institutional investors. This disappointment triggered a shocking decline in the price of Quant Tech stock which went down suddenly by 50%. This price decline, in turn, triggered a careful examination of Quant Tech's financial reporting practices which, at long last, convinced nearly everyone that a very large majority of Quant Tech's reported earnings had long been phony earnings and that massive and deliberate misreporting had gone on for a great many years. This triggered even more price decline for Quant Tech stock until in mid-2003 the market capitalization of Quant Tech was only $140 billion, down 90% from its peak only six months earlier.

A quick 90% decline in the price of the stock of such an important company, that was previously so widely owned and admired, caused immense human suffering, considering the $1.3 trillion in market value that had disappeared. And naturally, with Quant Tech's deserved disgrace, the public and political reaction included intense hatred and revulsion directed at Quant Tech, even though its admirable engineers were still designing the nation's best power plants.

Moreover, the hatred and revulsion did not stop with Quant Tech. It soon spread to other corporations, some of which plainly had undesirable financial cultures different from Quant Tech's only in degree. The public and political hatred, like the behavior that had caused it, soon went to gross excess and fed upon itself. Financial misery spread far beyond investors into a serious recession like that of Japan in the 1990s following the long period of false Japanese accounting.

There was huge public antipathy to professions following the Great Scandal. The accounting profession, of course, got the most blame. The rule-making body for accountants had long borne the acronym "F.A.S.B." And now nearly everyone said this stood for "Financial Accounts Still Bogus".

Economics professors likewise drew much criticism for failing to blow the whistle on false accounting and for not sufficiently warning about eventual bad macroeconomic effects of widespread false accounting. So great was the disappointment with conventional economists that Harvard's John Kenneth Galbraith received the Nobel Prize in economics. After all, he had once predicted that massive, undetected corporate embezzlement would have a wonderfully stimulating effect on the economy. And people could now see that something very close to what Galbraith had predicted had actually happened in the years preceding 2003 and had thereafter helped create a big, reactive recession.

With Congress and the S.E.C. so heavily peopled by lawyers, and with lawyers having been so heavily involved in drafting financial disclosure documents now seen as bogus, there was a new "lawyer" joke every week. One such was: "The butcher says 'the reputation of lawyers has fallen dramatically', and the check-out clerk replies: "How do you fall dramatically off a pancake?'"

But the hostility to established professions did not stop with accountants, economists and lawyers. There were many adverse "rub-off" effects on reputations of professionals that had always performed well, like engineers who did not understand the financial fraud that their country had made not a permissible option but a legal requirement.

In the end, much that was good about the country, and needed for its future felicity, was widely and unwisely hated.

At this point, action came from a Higher Realm. God himself, who reviews all, changed His decision schedule to bring to the fore the sad case of the Great Financial Scandal of 2003. He called in his chief detective and said, "Smith, bring in for harsh but fair judgment the most depraved of those responsible for this horrible outcome."

But when Smith brought in a group of security analysts who had long and uncritically touted the stock of Quant Tech, the Great Judge was displeased. "Smith," he said, "I can't come down hardest on low-level cognitive error, much of it subconsciously caused by the standard incentive systems of the world."

Next, Smith brought in a group of S.E.C. Commissioners and powerful politicians. "No, no," said the Great Judge, "These people operate in a virtual maelstrom of regrettable forces and can't reasonably be expected to meet the behavioral standard you seek to impose."

Now the chief detective thought he had gotten the point. He next brought in the corporate officers who had practiced their version of “modern financial engineering” at Quant Tech. “You are getting close,” said the Great Judge, “but I told you to bring in the most depraved. These officers will, of course, get strong punishment for their massive fraud and disgusting stewardship of the great engineer’s legacy. But I want you to bring in the miscreants who will soon be in the lowest circle in Hell, the ones who so easily could have prevented all this calamity.”

At last the chief detective truly understood. He remembered that the lowest circle of Hell was reserved for traitors. And so he now brought in from Purgatory a group of elderly persons who, in their days on earth, had been prominent partners in major accounting firms. “Here are your traitors,” said the chief detective. “They adopted the false accounting convention for employee stock options. They occupied high positions in one of the noblest professions, which, like Yours, helps make society work right by laying down the right rules. They were very smart and securely placed, and it is inexcusable that they deliberately caused all this lying and cheating that was so obviously predictable. They well knew what they were doing was disastrously wrong, yet they did it anyway. Owing to press of business in Your Judicial System, you made a mistake at first in punishing them so lightly. But now you can send them into the lowest circle in Hell.”

Startled by the vehemence and presumption, the Great Judge paused. Then He quietly said: “Well done, my good and faithful servant.”

This account is not an implied prediction about 2003. It is a work of fiction. Except in the case of Professor Galbraith, any resemblances to real persons or companies is accidental. It was written in an attempt to focus possibly useful attention on certain modern behaviors and belief systems.

11/10/00 TALK OF CHARLES T. MUNGER TO BREAKFAST MEETING OF THE PHILANTHROPY ROUND TABLE

I am here today to talk about so-called “wealth effects” from rising prices for U.S. Common stocks.

I should concede, at the outset, that “wealth effects” are part of the academic discipline of economics and that I have never taken a single course in economics, nor tried to make a single dollar, ever, from foreseeing macroeconomic changes.

Nonetheless, I have concluded that most PhD economists under appraise the power of the common-stock-based “wealth effect”, under current extreme conditions.

Everyone now agrees on two things. First, spending proclivity is influenced in an upward direction when stock prices go up and in a downward direction when stock prices go down. And, second, the proclivity to spend is terribly important in macroeconomics. However, the professionals disagree about size and timing of “wealth effects”, and how they interact with other effects, including the obvious complication that increased spending tends to drive up stock prices while stock prices are concurrently driving up spending. Also, of course, rising stock prices increase corporate earnings, even when spending is static, for instance, by reducing pension cost accruals after which stock prices tend to rise more. Thus “wealth effects” involve mathematical puzzles that are not nearly so well worked out as physics theories and never can be.

The “wealth effect” from rising U.S. stock prices is particularly interesting right now for two reasons. First, there has never been an advance so extreme in the price of widespread stock holdings and, with stock prices going up so much faster than GNP, the related “wealth effect” must now be bigger than was common before. And second, what has happened in Japan over roughly the last ten years has shaken up academic economics, as it obviously should, creating strong worries about recession from “wealth effects” in reverse.

In Japan, with much financial corruption, there was an extreme rise in stock and real estate prices for a very long time, accompanied by extreme real economic growth, compared to the U.S. Then asset values crashed and the Japanese economy stalled out at a very suboptimal level. After this Japan, a modem economy that had learned all the would-be-corrective Keynesian and monetary tricks, pushed these tricks hard and long. Japan, for many years, not only ran an immense government deficit but also reduced interest rates to a place within hailing distance of zero, and kept them there. Nonetheless, the Japanese economy year after year, stays stalled, as Japanese proclivity to spend stubbornly resists all the tricks of the economists. And Japanese stock prices stay down. This Japanese experience is a disturbing example for everyone, and, if something like it happened here, would leave shrunken charitable foundations feeling clobbered by fate. Let us hope, as is probably the case, that the sad situation in Japan is caused in some large part by social psychological effects and corruption peculiar to Japan. In such case our country may be at least half as safe as is widely assumed.

Well, grant that spending proclivity, as influenced by stock prices, is now an important subject, and that the long Japanese recession is disturbing. How big are the economic influences of U.S.

stock prices? A median conclusion of the economics professionals, based mostly on data collected by the Federal Reserve System, would probably be that the "wealth effect" on spending from stock prices is not all that big. After all, even now, real household net worth, excluding pensions, is probably up by less than 100% over the last ten years and remains a pretty modest figure per household while market value of common stock is probably not yet one third of aggregate household net worth, excluding pensions. Moreover, such household wealth in common stocks is almost incredibly concentrated, and the super-rich don't consume in proportion to their wealth. Leaving out pensions, the top 1% of households probably hold about 50% of common stock value and the bottom 80% probably hold about 4%.

Based, on such data, plus unexciting past correlation between stock prices and spending, it is easy for a professional economist to conclude, say, that, even if the average household spends incrementally at a rate of 3% of asset values in stock, consumer spending would have risen less than ½% per year over the last ten years as a consequence of the huge, unprecedented, long lasting, consistent boom is stock prices.

I believe that such economic thinking widely misses underlying reality right now. To me, such thinking looks at the wrong numbers and asks the wrong questions. Let me, the ultimate amateur, boldly try to do a little better, or at least a little differently.

For one thing, I have been told, probably correctly, that Federal Reserve data collection, due to practical obstacles, doesn't properly take into account pension effects, including effects from 401(k) and similar plans. Assume some 63-year-old dentist has $1 million in GE stock in a private pension plan. The stock goes up in value to $2 million, and the dentist, feeling flush, trades in his very old Chevrolet and leases a new Cadillac at the give-away rate now common. To me this is an obvious large "wealth effect" in the dentist's spending. To many economists, using Federal Reserve data, I suspect the occasion looks like profligate dissaving by the dentist. To me the dentist, and many others like him, seem to be spending a lot more because of a very strong pension-related "wealth effect". Accordingly, I believe that present day "wealth effect" from pension plans is far from trivial and much larger than it was in the past.

For another thing, the traditional thinking of economists often does not take into account implications from the idea of "bezzle". Let me repeat: "bezzle", B-E-Z-Z-L-E.

The word "bezzle" is a contraction of the word "embezzle", and it was coined by Harvard Economics Professor John Kenneth Galbraith to stand for the increase in any period of undisclosed embezzlement. Galbraith coined the "bezzle" word because he saw that undisclosed embezzlement, per dollar, had a very powerful stimulating effect on spending. After all, the embezzler spends more because he has more income, and his employer spends as before because he doesn't know any of his assets are gone.

But Galbraith did not push his insight on. He was content to stop with being a stimulating gadfly. So I will now try to push Galbraith's "bezzle" concept on to the next logical level. As Keynes showed, in a naive economy relying on earned income, when the seamstress sells a coat to the shoemaker for $20, the shoemaker has $20 more to spend and the seamstress has $20 less to spend. There is lalapaloose effect on aggregate spending. But when the government prints another $20 bill and uses it to buy pair of shoes, the shoemaker has another $20 and no one feels poorer. And when the shoemaker next buys a coat, - the process goes on and on, not to an infinite increase, but with what is now called the Keynesian multiplier effect, a sort of lalapaloosa effect on spending. Similarly, an undisclosed embezzlement has stronger stimulative effects per dollar on spending than a same-sized honest exchange of goods. Galbraith, being Scottish, liked the bleakness of life demonstrated by his insight. After all, the Scottish enthusiastically accepted the idea of pre-ordained, unfixable infant damnation. But the rest of us don't like Galbraith's insight. Nevertheless, we have to recognize that Galbraith was roughly right.

No doubt Galbraith saw the Keynesian-multiplier-type economic effects promised by increases in "bezzle". But he stopped there. After all, "bezzle" could not grow very big, because discovery of massive theft was nearly inevitable and sure to have reverse effects in due course. Thus, increase in private "bezzle" could not drive economies up and up, and on and on, at least for a considerable time, like government spending.

Deterred by the apparent smallness of economic effects from his insight, Galbraith did not ask the next logical question: Are there important functional equivalents of "bezzle" that are large and not promptly self-destructive? My answer to this question is yes. I will next describe only one. I will join Galbraith in coining new words, first, "febezzle", to stand for the functional equivalent of "bezzle" and, second, "febezzlement", to describe the process of creating "febezzle", and third "febezzlers" to describe persons engaged in "febezzlement". Then I will identify an important source of "febezzle" right in this room. You people, I think, have created a lot of "febezzle" through your foolish investment management practices in dealing with your large holdings of common stock.

If a foundation, or other investor, wastes 3% of assets per year in unnecessary, nonproductive investment costs in managing a strongly rising stock portfolio, it still feels richer, despite the waste, while the people getting the wasted 3%, "febezzelers" though they are, think they are virtuously earning income. The situation is functioning like undisclosed embezzlement without being self-limited. Indeed, the process can expand for a long while by feeding on itself. And all the while what looks like spending from earned income of the receivers of the wasted 3% is, in substance, spending from a disguised "wealth effect" from rising stock prices.

This room contains many people pretty well stricken by expired years --- in my generation or the one following. We tend to believe in thrift and avoiding waste as good things, a process that has worked well for us. It is paradoxical and disturbing to us that economists have long praised foolish spending as a necessary ingredient of a successful economy. Let us call foolish expenditures "foolexures". And now you holders of old values are hearing one of you own add to the case for "foolexures" the case for "febezzlements" --- the functional equivalent of embezzlements. This may not seem like a nice way to start a new day. Please be assured that I don't like "febezzlements". It is just that I think "febezzlements" are widespread and have powerful economic effects. And I also think that one should recognize reality even when one doesn't like it, indeed especially when one doesn't like it. Also, I think one should cheerfully endure paradox that one can't remove by good thinking. Even in pure mathematics they can't remove all paradox, and the rest of us should also recognize we are going to have to endure a lot of paradox, like it or not.

Let me also take this occasion to state that my previous notion of 3% of assets per annum in waste in much institutional investment management related to stocks is quite likely too low in a great many cases. A friend, after my talk to foundation financial officers, sent me a summary of a study about mutual fund investors. The study concluded that the typical mutual fund investor gained at 7.25% per year in a 15-year period when the average stock fund gained at 12.8% per year (presumably after expenses). Thus the real performance lag for investors was over 5% of assets per year in addition to whatever percentage per year the mutual funds, after expenses, lagged behind stock market averages. If this mutual fund study is roughly right, it raises huge questions about foundation wisdom in changing investment managers all the time as mutual fund investors do. If the extra lag reported in the mutual fund study exists, it is probably caused in considerable measure by folly in constant removal of assets from lagging portfolio managers being forced to liquidate stockholdings, followed by placement of removed assets with new investment managers that have high-pressure, asset-gaining hoses in their mouths and clients whose investment results will not be improved by the super-rapid injection of new funds. I am always having trouble like that caused by this new mutual fund study. I describe something realistically that looks so awful that my description is disregarded as extreme satire instead of reality. Next, new reality tops the horror of my disbelieved description by some large amount. No wonder Munger notions of reality are not widely welcome. This may be my last talk to charitable foundations.

Now toss in with "febezzlement" in investment management about $750 billion in floating, ever-growing, ever-renewing wealth from employee stock options and you get lot more common-stock-related "wealth effect", driving consumption, with some of the "wealth effect" from employee stock options being, in substance, "febezzle" effect, facilitated by the corrupt accounting practice now required by law.

Next consider that each 100-point advance in the S&P adds about $1 trillion in stock market value, and throw in some sort of Keynesian-type multiplier effect related to all "febezzlement". The related macro-economic "wealth effects", I believe, become much larger than is conventionally supposed.

And aggregate "wealth effect" from stock prices can get very large indeed. It is an unfortunate fact that great and foolish excess can come into prices of common stocks in the aggregate. They are valued partly like bonds, based on roughly rational projections of use value in producing future cash. But they are also valued partly like Rembrandt paintings, purchased mostly because their prices have gone up, so far. This situation, combined with big "wealth effects", at first up and later down, can conceivably produce much mischief. Let us try to investigate this by a "thought experiment". One of the big British pension funds once bought a lot of ancient art, planning to sell it ten years later, which it did, at a modest profit. Suppose all pension funds purchased ancient art, and only ancient art, with all their assets. Wouldn't we eventually have a terrible mess on our hands, with great and undesirable macroeconomic consequences? And wouldn't the mess be bad if only half of all pension funds were invested in ancient art? And if half of all stock value became a consequence of mania, isn't the situation much like the case wherein half of pension assets are ancient art?

My foregoing acceptance of the possibility that stock value in aggregate can become irrationally high is contrary to the hard-form "efficient market" theory that many of you once learned as gospel from your mistaken professors of yore. Your mistaken professors were too much influenced by "rational man" models of human behavior from economics and too little by "foolish man" models from psychology and real-world experience. "Crowd folly", the tendency of humans, under some circumstances, to resemble lemmings, explains much foolish thinking of brilliant men and much foolish behavior --- like investment management practices of many foundations represented here today. It is sad that today each institutional investor apparently fears most of all that its investment practices will be different from practices of the rest of the crowd.

Well, this is enough uncredentialed musing for one breakfast meeting. If I am at all right, our -present prosperity has had a stronger boost from common-stock-price-related "wealth effects", some of them disgusting, than has been the case in many former booms. If so, what was greater on the upside in the recent boom could also be greater on the downside at some time of future stock price decline. Incidentally, the economists may well conclude, eventually, that, when stock market advances and declines are regarded as long lasting, there is more downside force on optional consumption per dollar of stock market decline than there is upside force per dollar of stock market rise. I suspect that economists would believe this already if they were more willing to take assistance from the best ideas outside their own discipline, or even to look harder at Japan.

Remembering Japan, I also want to raise the possibility that there are, in the very long term, "virtue effects" in economics--- for instance that widespread corrupt accounting will eventually create bad long term consequences as a sort of obverse effect from the virtue-based boost double-entry book-keeping gave to the heyday of Venice. I suggest that when the financial scene starts reminding you of Sodom and Gomorrah, you should fear practical consequences even if you like to participate in what is going on.

Finally, I believe that implications for charitable foundations of my conclusions today, combined with conclusions in my former talk to foundation financial officers, go way beyond implications for investment techniques. If I am right, almost all U.S. foundations are unwise through failure to understand their own investment operations, related to the larger system. If so, this is not good. A rough rule in life is that an organization foolish in one way in dealing with a complex system is all too likely to be foolish in another. So the wisdom of foundation donations may need as much improvement as investment practices of foundations. And here we have two more old rules to guide us. One rule is ethical and the other is prudential.

The ethical rule is from Samuel Johnson who believed that maintenance of easily removable ignorance by a responsible office holder was treacherous malfeasance in meeting moral obligation. The prudential rule is that underlying the old Warner & Swasey advertisement for machine tools: "The man who needs a new machine tool, and hasn't bought it, is already paying for it". The Warner & Swasey rule also applies, I believe, to thinking tools. If you don't have the right thinking tools, you, and the people you seek to help, are already suffering from your easily removable ignorance.

Investment Practices of Leading Charitable Foundations

Speech of Charles T. Munger, Vice Chair, Berkshire Hathaway, at Miramar Sheraton Hotel, Santa Monica, CA, on October 14, 1998, to a meeting of the Foundation Financial Officers Group sponsored by The Conrad Hilton Foundation, The Amateur Athletic Foundation, The J. Paul Getty Trust, and Rio Hondo Memorial Foundation. The speech is reproduced here (http://www.tiff.org/pub/library/Other_Resources/Munger_Speech.html) with Mr. Munger's permission.

I am speaking here today because my friend, John Argue, asked me. And John well knew that I, who, unlike many other speakers on your agenda, have nothing to sell any of you, would be irreverent about much current investment practice in large institutions, including charitable foundations. Therefore any hostility my talk will cause should be directed at John Argue who comes from the legal profession and may even enjoy it.

It was long the norm at large charitable foundations to invest mostly in unleveraged, marketable, domestic securities, mostly equities. The equities were selected by one or a very few investment counselling organizations. But in recent years there has been a drift toward more complexity. Some foundations, following the lead of institutions like Yale, have tried to become much better versions of Bernie Cornfeld's "fund of funds." This is an amazing development. Few would have predicted that, long after Cornfeld's fall into disgrace, leading universities would be leading foundations into Cornfeld's system.

Now, in some foundations, there are not few but many investment counselors, chosen by an additional layer of consultants who are hired to decide which investment counselors are best, help in allocating funds to various categories, make sure that foreign securities are not neglected in favor of domestic securities, check validity of claimed investment records, insure that claimed investment styles are scrupulously followed, and help augment an already large diversification in a way that conforms to the latest notions of corporate finance professors about volatility and "beta."

But even with this amazingly active, would-be-polymathic new layer of consultant-choosing consultants, the individual investment counselors, in picking common stocks, still rely to a considerable extent on a third layer of consultants. The third layer consists of the security analysts employed by investment banks. These security analysts receive enormous salaries, sometimes set in seven figures after bidding wars. The hiring investment banks recoup these salaries from two sources: (1) commissions and trading spreads born by security buyers (some of which are rebated as "soft dollars" to money managers), plus (2) investment banking charges paid by corporations which appreciate the enthusiastic way their securities are being recommended by the security analysts.

There is one thing sure about all this complexity including its touches of behavior lacking the full punctilio of honor. Even when nothing but unleveraged stock-picking is involved, the total cost of all the investment management, plus the frictional costs of fairly often getting in and out of many large investment positions, can easily reach 3% of foundation net worth per annum if foundations, urged on by consultants, add new activity, year after year. This full cost doesn't show up in conventional accounting. But that is because accounting has limitations and not because the full cost isn't present.

Next, we come to time for a little arithmetic: it is one thing each year to pay the croupiers 3% of starting wealth when the average foundation is enjoying a real return, say, of 17% before the croupiers' take. But it is not written in the stars that foundations will always gain 17% gross, a common result in recent years. And if the average annual gross real return from indexed investment in equities goes back, say, to 5% over some long future period, and the croupiers' take turns out to remain the waste it has always been, even for the average intelligent player, then the average intelligent foundation will be in a prolonged, uncomfortable, shrinking mode. After all, 5% minus 3% minus 5% in donations leaves an annual shrinkage of 3%.

All the equity investors, in total, will surely bear a performance disadvantage per annum equal to the total croupiers' costs they have jointly elected to bear. This is an unescapable fact of life. And it is also unescapable that exactly half of the investors will get a result below the median result after the croupiers' take, which median result may well be somewhere between unexciting and lousy.

Human nature being what it is, most people assume away worries like those I raise. After all, five centuries before Christ Demosthenes noted that: "What a man wishes, he will believe." And in self appraisals of prospects and talents it is the norm, as Demosthenes predicted, for people to be ridiculously over-optimistic. For instance, a careful survey in Sweden showed that 90% of automobile drivers considered themselves above average. And people who are successfully selling something, as investment counselors do, make Swedish drivers sound like depressives. Virtually every investment expert's public assessment is that he is above average, no matter what is the evidence to the contrary.

But, you may think, my foundation, at least, will be above average. It is well endowed, hires the best, and considers all investment issues at length and with objective professionalism. And to this I respond that an excess of what seems like professionalism will often hurt you horribly — precisely because the careful procedures themselves often lead to overconfidence in their outcome.

General Motors recently made just such a mistake, and it was a lollapalooza. Using fancy consumer surveys, its excess of professionalism, it concluded not to put a fourth door in a truck designed to serve also as the equivalent of a comfortable five-passenger car. Its competitors, more basic, had actually seen five people enter and exit cars. Moreover they had noticed that people were used to four doors in a comfortable five-passenger car and that biological creatures ordinarily prefer effort minimization in routine activies and don't like removals of long-enjoyed benefits. There are only two words that come instantly to mind in reviewing General Motors horrible decision, which has blown many hundreds of millions of dollars. And one of those words is: "oops."

Similarly, the hedge fund known as "Long Term Capital Management" recently collapsed, through overconfidence in its highly leveraged methods, despite I.Qs. of its principals that must have averaged 160. Smart, hard-working people aren't exempted from professional disasters from overconfidence. Often, they just go around in the more difficult voyages they choose, relying on their self-appraisals that they have superior talents and methods.

It is, of course, irritating that extra care in thinking is not all good but also introduces extra error. But most good things have undesired "side effects," and thinking is no exception. The best defense is that of the best physicists, who systematically criticize themselves to an extreme degree, using a mindset described by Nobel Laureate Richard Feynman as follows: "The first principle is that you must not fool yourself and you're the easiest person to fool."

But suppose that an abnormally realistic foundation, thinking like Feynman, fears a poor future investment outcome because it is unwilling to assume that its unleveraged equities will outperform equity indexes, minus all investment costs, merely because the foundation has adopted the approach of becoming a "fund of funds," with much investment turnover and layers of consultants that consider themselves above average. What are this fearful foundation's options as it seeks improved prospects?

There are at least three modern choices:

1. The foundation can both dispense with its consultants and reduce its investment turnover as it changes to indexed investment in equities.

2. The foundation can follow the example of Berkshire Hathaway, and thus get total annual croupier costs below 1/10 of 1% of principal per annum, by investing with virtually total passivity in a very few much-admired domestic corporations. And there is no reason why some outside advice can't be used in this process. All the fee payor has to do is suitably control the high talent in investment counseling organizations so that the servant becomes the useful tool of its master, instead of serving itself under the perverse incentives of a sort of Mad Hatter's tea party.

3. The foundation can supplement unleveraged investment in marketable equities with investment in limited partnerships that do some combination of the following: unleveraged investment in high-tech corporations in their infancy; leveraged investments in corporate buy-outs, leveraged relative value trades in equities, and leveraged convergence trades and other exotic trades in all kinds of securities and derivatives.

For the obvious reasons given by purveyors of indexed equities, I think choice (1), indexing, is a wiser choice for the average foundation than what it is now doing in unleveraged equity investment. And particularly so as its present total croupier costs exceed 1% of principal per annum. Indexing can't work well forever if almost everybody turns to it. But it will work all right for a long time.

Choice (3), investment in fancy limited partnerships, is largely beyond the scope of this talk. I will only say that the Munger Foundation does not so invest, and briefly mention two considerations bearing on "LBO" funds.

The first consideration bearing on LBO funds is that buying 100% of corporations with much financial leverage and two layers of promotional carry (one for the management and one for the general partners in the LBO fund) is no sure thing to outperform equity indexes in the future if equity indexes perform poorly in the future. In substance, a LBO fund is a better way of buying equivalents of marketable equities on margin, and the debt could prove disastrous if future marketable equity performance is bad. And particularly so if the bad performance comes from generally bad business conditions.

The second consideration is increasing competition for LBO candidates. For instance, if the LBO candidates are good service corporations, General Electric can now buy more than $10 billion worth per year in GE's credit corporation, with 100% debt financing at an interest rate only slightly higher than the U.S. Government is paying. This sort of thing is not ordinary competition, but supercompetition. And there are now very many LBO funds, both large and small, mostly awash in money and with general partners highly incentivized to buy something. In addition there is increased buying competition from corporations other than GE, using some combination of debt and equity.

In short, in the LBO field, there is a buried covariance with marketable equities — toward disaster in generally bad business conditions — and competition is now extreme.

Given time limitation, I can say no more about limited partnerships, one of which I once ran. This leaves for extensive discussion only foundation choice (2), more imitation of the investment practices of Berkshire Hathaway in maintaining marketable equity portfolios with virtually zero turnover and with only a very few stocks chosen. This brings us to the question of how much investment diversification is desirable at foundations.

I have more than skepticism regarding the orthodox view that huge diversification is a must for those wise enough so that indexation is not the logical mode for equity investment. I think the orthodox view is grossly mistaken.

In the United States, a person or institution with almost all wealth invested, long term, in just three fine domestic corporations is securely rich. And why should such an owner care if at any time most other investors are faring somewhat better or worse. And particularly so when he rationally believes, like Berkshire, that his long-term results will be superior by reason of his lower costs, required emphasis on long-term effects, and concentration in his most preferred choices.

I go even further. I think it can be a rational choice, in some situations, for a family or a foundation to remain 90% concentrated in one equity. Indeed, I hope the Mungers follow roughly this course. And I note that the Woodruff foundations have, so far, proven extremely wise to retain an approximately 90% concentration in the founder's Coca-Cola stock. It would be interesting to calculate just how all American foundations would have fared if they had never sold a share of founder's stock. Very many, I think, would now be much better off. But, you may say, the diversifiers simply took out insurance against a catastrophe that didn't occur. And I reply: there are worse things than some foundation's losing relative clout in the world, and rich institutions, like rich individuals, should do a lot of self insurance if they want to maximize long-term results.

Furthermore, all the good in the world is not done by foundation donations. Much more good is done through the ordinary business operations of the corporations in which the foundations invest. And some corporations do much more good than others in a way that gives investors therein better than average long-term prospects do. And I don't consider it foolish, stupid, evil, or illegal for a foundation to greatly concentrate investment in what it admires or even loves. Indeed, Ben

Franklin required just such an investment practice for the charitable endowment created by his will.

One other aspect of Berkshire's equity investment practice deserves comparative mention. So far, there has been almost no direct foreign investment at Berkshire and much foreign investment at foundations.

Regarding this divergent history, I wish to say that I agree with Peter Drucker that the culture and legal systems of the United States are especially favorable to shareholder interests, compared to other interests and compared to most other countries. Indeed, there are many other countries where any good going to public shareholders has a very low priority and almost every other constituency stands higher in line. This factor, I think is underweighed at many investment institutions, probably because it does not easily lead to quantitative thinking using modern financial technique. But some important factor doesn't lose share of force just because some "expert" can better measure other types of force. Generally, I tend to prefer over direct foreign investment Berkshire's practice of participating in foreign economies through the likes of Coca-Cola and Gillette.

To conclude, I will make one controversial prediction and one controversial argument.

The controversial prediction is that, if some of you make your investment style more like Berkshire Hathaway's, in a long-term retrospect you will be unlikely to have cause for regret, even if you can't get Warren Buffett to work for nothing. Instead, Berkshire will have cause for regret as it faces more intelligent investment competition. But Berkshire won't actually regret any disadvantage from your enlightenment. We only want what success we can get despite encouraging others to share our general views about reality.

My controversial argument is an additional consideration weighing against the complex, high-cost investment modalities becoming ever more popular at foundations. Even if, contrary to my suspicions, such modalities should turn out to work pretty well, most of the money-making activity would contain profoundly antisocial effects. This would be so because the activity would exacerbate the current, harmful trend in which ever more of the nation's ethical young brainpower is attracted into lucrative money-management and its attendant modern frictions, as distinguished from work providing much more value to others. Money management does not create the right examples. Early Charlie Munger is a horrible career model for the young, because not enough was delivered to civilization in return for what was wrested from capitalism. And other similar career models are even worse.

Rather than encourage such models, a more constructive choice at foundations is long-term investment concentration in a few domestic corporations that are wisely admired.

Why not thus imitate Ben Franklin? After all, old Ben was very effective in doing public good. And he was a pretty good investor, too. Better his model, I think, than Bernie Cornfeld's. The choice is plainly yours to make.

NOVEMBER 22, 1999

FORTUNE

The most celebrated of investors says stocks can't possibly meet the public's expectations. As for the Internet? He notes how few people got rich from two other transforming industries, auto and aviation.

Mr. Buffett on the Stock Market

Warren Buffett, chairman of Berkshire Hathaway, almost never talks publicly about the general level of stock prices—neither in his famed annual report nor at Berkshire's thronged annual meetings nor in the rare speeches he gives. But in the past few months, on four occasions, Buffett did step up to that subject, laying out his opinions, in ways both analytical and creative, about the long-term future for stocks. FORTUNE*'s Carol Loomis heard the last of those talks, given in September to a group of Buffett's friends (of whom she is one), and also watched a videotape of the first speech, given in July at Allen & Co.'s Sun Valley, Idaho, bash for business leaders. From those extemporaneous talks (the first made with the Dow Jones industrial average at 11,194), Loomis distilled the following account of what Buffett said. Buffett reviewed it and weighed in with some clarifications.*

Investors in stocks these days are expecting far too much, and I'm going to explain why. That will inevitably set me to talking about the general stock market, a subject I'm usually unwilling to discuss. But I want to make one thing clear going in: Though I will be talking about the level of the market, I will *not* be predicting its next moves. At Berkshire we focus almost exclusively on the valuations of individual companies, looking only to a very limited extent at the valuation of the overall market. Even then, valuing the market has nothing to do with where it's going to go next week or next month or next year, a line of thought we never get into. The fact is that markets behave in ways, sometimes for a very long stretch, that are not linked to value. Sooner or later, though, value counts. So what I am going to be saying—assuming it's correct—*will* have implications for the long-term results to be realized by American stockholders.

Let's start by defining "investing." The definition is simple but often forgotten: Investing is laying out money now to get more money back in the future—more money in *real* terms, after taking inflation into account.

Now, to get some historical perspective, let's look back at the 34 years before this one—and here we are going to see an almost Biblical kind of symmetry, in the sense of lean years and fat years—to observe what happened in the stock market. Take, to begin with, the first 17 years of the period, from the end of 1964 through 1981. Here's what took place in that interval:

- DOW JONES INDUSTRIAL AVERAGE
  Dec. 31, 1964: **874.12**
  Dec. 31, 1981: **875.00**

Now I'm known as a long-term investor and a patient guy, but that is not my idea of a big move.

And here's a major and very opposite fact: During that same 17 years, the GDP of the U.S.—that is, the business being done in this country—almost quintupled, rising by 370%. Or, if we look at another measure, the sales of the FORTUNE 500 (a changing mix of companies, of course) more than sextupled. And yet the Dow went exactly nowhere.

To understand why that happened, we need first to look at one of the two important variables that affect investment results: interest rates. These act on financial valuations the way gravity acts on matter: The higher the rate, the greater the downward pull. That's because the rates of return that investors need from any kind of investment are directly tied to the risk-free rate that they can earn from government securities. So if the government rate rises, the prices of all other investments must adjust downward, to a level that brings their expected rates of return into line. Conversely, if government interest rates fall, the move pushes the prices of all other investments upward. The basic proposition is this: What an investor should pay today for a dollar to be received tomorrow can *only* be determined by first looking at the risk-free interest rate.

Consequently, every time the risk-free rate moves by one basis point—by 0.01%—the value of every investment in the country changes. People can see this easily in the case of bonds, whose value is normally affected only by interest rates. In the case of equities or real estate or farms or whatever, other very important variables are almost always at work, and that means the effect of interest rate changes is usually obscured. Nonetheless, the effect—like the invisible pull of gravity—is constantly there.

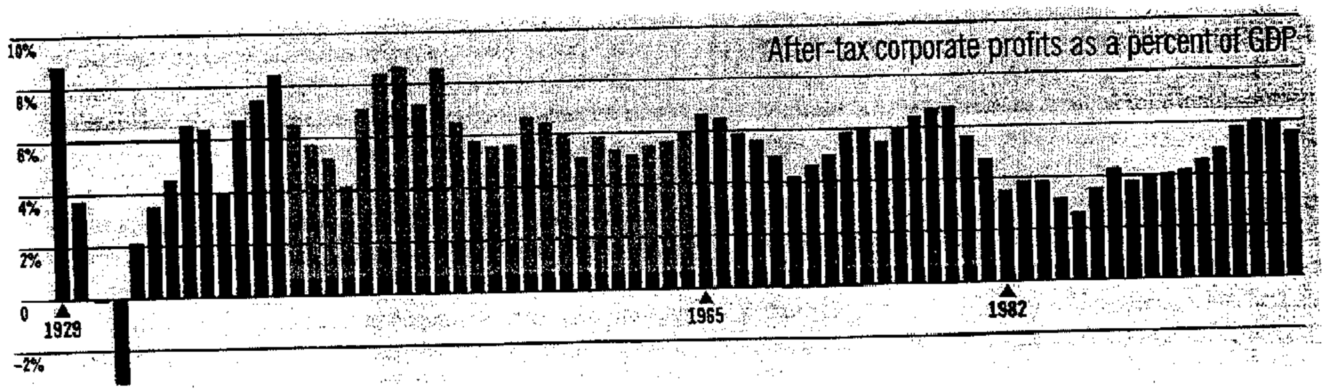
In the 1964–81 period, there was a tremendous increase in the rates on long-term government bonds, which moved from just over 4% at year-end 1964 to more than 15% by late 1981. That rise in rates had a huge depressing effect on the value of all investments, but the one we noticed, of course, was the price of equities. So *there*—in that tripling of the gravitational pull of interest rates—lies the major explanation of why tremendous growth in the economy was accompanied by a stock market going nowhere.

Then, in the early 1980s, the situation reversed itself. You will remember Paul Volcker coming in as chairman of the Fed and remember also how unpopular he was. But the heroic things he did—his taking a two-by-four to the economy and breaking the back of inflation—caused the interest rate trend to reverse, with some rather spectacular results. Let's say you put $1 million into the 14% 30-year U.S. bond issued Nov. 16, 1981, and reinvested the coupons. That is, every time you got an interest payment, you used it to buy more of that same bond. At the end of 1998, with long-term governments by then selling at 5%, you would have had $8,181,219 and would have earned an annual return of more than 13%.

That 13% annual return is better than stocks have done in a great many 17-year periods in history—in most 17-year periods, in fact. It was a helluva result, and from none other than a stodgy bond.

The power of interest rates had the effect of pushing up equities as well, though other things that we will get to pushed additionally. And so here's what equities did in that same 17 years: If you'd invested $1 million in the Dow on Nov. 16, 1981, and reinvested all dividends, you'd have had $19,720,112 on Dec. 31, 1998. And your annual return would have been 19%.

The increase in equity values since 1981 beats anything you can find in history. This increase even surpasses what you would have realized if you'd bought stocks in 1932, at their Depression bottom—on its lowest day, July 8, 1932, the Dow closed at 41.22—and held them for 17 years.



FORTUNE CHART

The second thing bearing on stock prices during this 17 years was after-tax corporate profits, which this chart [above] displays as a percentage of GDP. In effect, what this chart tells you is what portion of the GDP ended up every year with the shareholders of American business.

The chart, as you will see, starts in 1929. I'm quite fond of 1929, since that's when it all began for me. My dad was a stock salesman at the time, and after the Crash came, in the fall, he was afraid to call anyone—all those people who'd been burned. So he just stayed home in the afternoons. And there wasn't television then. Soooo ... I was conceived on or about Nov. 30, 1929 (and born nine months later, on Aug. 30, 1930), and I've forever had a kind of warm feeling about the Crash.

As you can see, corporate profits as a percentage of GDP peaked in 1929, and then they tanked. The left-hand side of the chart, in fact, is filled with aberrations: not only the Depression but also a wartime profits boom—sedated by the excess-profits tax—and another boom after the war. But from 1951 on, the percentage settled down pretty much to a 4% to 6.5% range.

By 1981, though, the trend was headed toward the bottom of that band, and in 1982 profits tumbled to 3.5%. So at that point investors were looking at two strong negatives: Profits were sub-par and interest rates were sky-high.

And as is so typical, investors projected out into the future what they were seeing. That's their unshakable habit: looking into the rear-view mirror instead of through the windshield. What they were observing, looking backward, made them very discouraged about the country. They were projecting high interest rates, they were projecting low profits, and they were therefore valuing the Dow at a level that was the same as 17 years earlier, even though GDP had nearly quintupled.

Now, what happened in the 17 years beginning with 1982? One thing that didn't happen was comparable growth in GDP: In this second 17-year period, GDP less than tripled. But interest rates began their descent, and after the Volcker effect wore off, profits began to climb—not steadily, but nonetheless with real power. You can see the profit trend in the chart, which shows that by the late 1990s, after-tax profits as a percent of GDP were running close to 6%, which is on the upper part of the "normalcy" band. And at the end of 1998, long-term government interest rates had made their way down to that 5%.

These dramatic changes in the two fundamentals that matter most to investors explain much, though not all, of the more than tenfold rise in equity prices—the Dow went from 875 to 9,181— during this 17-year period. What was at work also, of course, was market psychology. Once a bull market gets under way, and once you reach the point where everybody has made money no matter what system he or she followed, a crowd is attracted into the game that is responding not to interest rates and profits but simply to the fact that it seems a mistake to be out of stocks. In effect, these people superimpose an I-can't-miss-the-party factor on top of the fundamental factors that drive the market. Like Pavlov's dog, these "investors" learn that when the bell rings—in this case, the one that opens the New York Stock Exchange at 9:30 A.M.—they get fed. Through this daily reinforcement, they become convinced that there is a God and that He wants them to get rich.

Today, staring fixedly back at the road they just traveled, most investors have rosy expectations. A Paine Webber and Gallup Organization survey released in July shows that the least experienced investors—those who have invested for less than five years—expect annual returns over the next ten years of 22.6%. Even those who have invested for more than 20 years are expecting 12.9%.

Now, I'd like to argue that we can't come even remotely close to that 12.9%, and make my case by examining the key value-determining factors. Today, if an investor is to achieve juicy profits in the market over ten years or 17 or 20, one or more of three things must happen. I'll delay talking about the last of them for a bit, but here are the first two:

(1) Interest rates must fall further. If government interest rates, now at a level of about 6%, were to fall to 3%, that factor alone would come close to doubling the value of common stocks. Incidentally, if you think interest rates are going to do that—or fall to the 1% that Japan has experienced—you should head for where you can really make a bundle: bond options.

(2) Corporate profitability in relation to GDP must rise. You know, someone once told me that New York has more lawyers than people. I think that's the same fellow who thinks profits will become larger than GDP. When you begin to expect the growth of a component factor to forever outpace that of the aggregate, you get into certain mathematical problems. In my opinion, you have to be wildly optimistic to believe that corporate profits as a percent of GDP can, for any sustained period, hold much above 6%. One thing keeping the percentage down will be competition, which is alive and well. In addition, there's a public-policy point: If corporate investors, in aggregate, are going to eat an ever-growing portion of the American economic pie, some other group will have to settle for a smaller portion. That would justifiably raise political problems—and in my view a major reslicing of the pie just isn't going to happen.

So where do some reasonable assumptions lead us? Let's say that GDP grows at an average 5% a year—3% real growth, which is pretty darn good, plus 2% inflation. If GDP grows at 5%, and you don't have some help from interest rates, the aggregate value of equities is not going to grow a whole lot more. Yes, you can add on a bit of return from dividends. But with stocks selling where they are today, the importance of dividends to total return is way down from what it used to be. Nor can investors expect to score because companies are busy boosting their per-share earnings by buying in their stock. The offset here is that the companies are just about as busy issuing new stock, both through primary offerings and those ever present stock options.

So I come back to my postulation of 5% growth in GDP and remind you that it is a limiting factor in the returns you're going to get: You cannot expect to forever realize a 12% annual increase —much less 22%—in the valuation of American business if its profitability is growing only at 5%. The inescapable fact is that the value of an asset, whatever its character, cannot over the long term grow faster than its earnings do.

Now, maybe you'd like to argue a different case. Fair enough. But give me your assumptions. If you think the American public is going to make 12% a year in stocks, I think you have to say, for example, "Well, that's because I expect GDP to grow at 10% a year, dividends to add two percentage points to returns, and interest rates to stay at a constant level." Or you've got to rearrange these key variables in some other manner. The Tinker Bell approach—clap if you believe—just won't cut it.

The auto industry transformed the world, but many hundreds of car makes became road-kill among them the Berkshire and Omaha.

Beyond that, you need to remember that future returns are always affected by current valuations and give some thought to what you're getting for your money in the stock market right now. Here are two 1998 figures for the FORTUNE 500. The companies in this universe account for about 75% of the value of all publicly owned American businesses, so when you look at the 500, you're really talking about America Inc.

- FORTUNE 500
  1998 profits: **$334,335,000,000**
  Market value on March 15, 1999: **$9,907,233,000,000**

As we focus on those two numbers, we need to be aware that the profits figure has its quirks. Profits in 1998 included one very unusual item—a $16 billion bookkeeping gain that Ford reported from its spinoff of Associates—and profits also included, as they always do in the 500, the earnings of a few mutual companies, such as State Farm, that do not have a market value. Additionally, one major corporate expense, stock-option compensation costs, is not deducted from profits. On the other hand, the profits figure has been reduced in some cases by write-offs that probably didn't reflect economic reality and could just as well be added back in. But leaving aside these qualifications, investors were saying on March 15 this year that they would pay a hefty $10 trillion for the $334 billion in profits.

Bear in mind—this is a critical fact often ignored—that investors as a whole cannot get anything out of their businesses except what the businesses earn. Sure, you and I can sell each other stocks at higher and higher prices. Let's say the FORTUNE 500 was just one business and that the people in this room each owned a piece of it. In that case, we could sit here and sell each other pieces at ever-ascending prices. You personally might outsmart the next fellow by buying low and selling high. But no money would leave the game when that happened: You'd simply take out what he put in. Meanwhile, the experience of the *group* wouldn't have been affected a whit, because its fate would still be tied to profits. The absolute most that the owners of a business, in aggregate, can get out of it in the end—between now and Judgment Day—is what that business earns over time.

Buffett likes to think that if he had been at Kitty Hawk in 1903, he would have been farsighted enough to shoot down Orville's plane.

And there's still another major qualification to be considered. If you and I were trading pieces of our business in this room, we could escape transactional costs because there would be no brokers around to take a bite out of every trade we made. But in the real world investors have a habit of wanting to change chairs, or of at least getting advice as to whether they should, and that costs money—big money. The expenses they bear—I call them frictional costs—are for a wide range of items. There's the market maker's spread, and commissions, and sales loads, and 12b-1 fees, and management fees, and custodial fees, and wrap fees, and even subscriptions to financial publications. And don't brush these expenses off as irrelevancies. If you were evaluating a piece of investment real estate, would you not deduct management costs in figuring your return? Yes, of course—and in exactly the same way, stock market investors who are figuring their returns must face up to the frictional costs they bear.

And what do they come to? My estimate is that investors in American stocks pay out well over $100 billion a year—say, $130 billion—to move around on those chairs or to buy advice as to whether they should! Perhaps $100 billion of that relates to the FORTUNE 500. In other words, investors are dissipating almost a third of everything that the FORTUNE 500 is earning for them—that $334 billion in 1998—by handing it over to various types of chair-changing and chair-advisory "helpers." And when that handoff is completed, the investors who own the 500 are reaping less than a $250 billion return on their $10 trillion investment. In my view, that's slim pickings.

Perhaps by now you're mentally quarreling with my estimate that $100 billion flows to those "helpers." How do they charge thee? Let me count the ways. Start with transaction costs, including commissions, the market maker's take, and the spread on underwritten offerings: With double counting stripped out, there will this year be at least 350 billion shares of stock traded in the U.S., and I would estimate that the transaction cost per share for each side—that is, for both the buyer and the seller—will average 6 cents. That adds up to $42 billion.

Move on to the additional costs: hefty charges for little guys who have wrap accounts; management fees for big guys; and, looming very large, a raft of expenses for the holders of domestic equity mutual funds. These funds now have assets of about $3.5 trillion, and you have to conclude that the annual cost of these to their investors—counting management fees, sales loads, 12b-1 fees, general operating costs—runs to at least 1%, or $35 billion.

And none of the damage I've so far described counts the commissions and spreads on options and futures, or the costs borne by holders of variable annuities, or the myriad other charges that the "helpers" manage to think up. In short, $100 billion of frictional costs for the owners of the FORTUNE 500—which is 1% of the 500's market value—looks to me not only highly defensible as an estimate, but quite possibly on the low side.

It also looks like a horrendous cost. I heard once about a cartoon in which a news commentator says, "There was no trading on the New York Stock Exchange today. Everyone was happy with what they owned." Well, if that were really the case, investors would every year keep around $130 billion in their pockets.

Bezos on Buffett

Skeptical of Internet mania, the founder and CEO of Amazon.com is spreading the gospel according to Buffett.

Warren Buffett doesn't mention the Internet on these pages. But he does talk about two other transforming industries that failed to reward investors over time: autos and aviation. Only a fool would ignore his implicit warning: A lot of people will lose a lot of money betting on the Internet. Amazon.com founder and CEO Jeff Bezos was so intrigued by Buffett's talk at Herb Allen's gathering of business leaders in Sun Valley, Idaho, last July that he asked Buffett for his lists of the automakers and aircraft manufacturers that didn't make it. "When new industries become phenomenons, a lot of investors bet on the wrong companies," Bezos says. Referring to Buffett's 70-page catalog of mostly dead car and truck makes, he adds, "I noticed that decades ago, it was *de rigueur* to use 'Motors' in the name, just as everybody uses 'dot-com' today. I thought, Wow, the parallel is interesting."

Especially interesting to a billionaire like Bezos, who knows something about stock valuations from his previous career as a hedge fund manager. Interesting also to Bezos the history buff, who likes to talk about the Cambrian explosion about 550 million years ago, when multicelled life spawned unprecedented variation of species—and with it, a wave of extinctions. Given this perspective, Bezos says, Buffett's analogies about bankrupt businesses "resonate deeply." Now Bezos is spreading the gospel according to Buffett and urging Amazon employees to run scared every day. "We still have the opportunity to be a footnote in the e-commerce industry," he says.

— Patricia Sellers

Let me summarize what I've been saying about the stock market: I think it's very hard to come up with a persuasive case that equities will over the next 17 years perform anything like—*anything* like—they've performed in the past 17. If I had to pick the most probable return, from appreciation and dividends combined, that investors in aggregate—repeat, aggregate—would earn in a world of constant interest rates, 2% inflation, and those ever hurtful frictional costs, it would be 6%. If you strip out the inflation component from this nominal return (which you would need to do however inflation fluctuates), that's 4% in real terms. And if 4% is wrong, I believe that the percentage is just as likely to be less as more.

Let me come back to what I said earlier: that there are three things that might allow investors to realize significant profits in the market going forward. The first was that interest rates might fall, and the second was that corporate profits as a percent of GDP might rise dramatically. I get to the third point now: Perhaps you are an optimist who believes that though investors as a whole may slog along, you yourself will be a winner. That thought might be particularly seductive in these early days of the information revolution (which I wholeheartedly believe in). Just pick the obvious winners, your broker will tell you, and ride the wave.

Well, I thought it would be instructive to go back and look at a couple of industries that transformed this country much earlier in this century: automobiles and aviation. Take automobiles first: I have here one page, out of 70 in total, of car and truck manufacturers that have operated in this country. At one time, there was a Berkshire car and an Omaha car. Naturally I noticed those. But there was also a telephone book of others.

All told, there appear to have been at least 2,000 car makes, in an industry that had an incredible impact on people's lives. If you had foreseen in the early days of cars how this industry would develop, you would have said, "Here is the road to riches." So what did we progress to by the 1990s? After corporate carnage that never let up, we came down to three U.S. car companies—themselves no lollapaloozas for investors. So here is an industry that had an enormous impact on America—and also an enormous impact, though not the anticipated one, on investors.

Sometimes, incidentally, it's much easier in these transforming events to figure out the losers. You could have grasped the importance of the auto when it came along but still found it hard to pick companies that would make you money. But there was one obvious decision you could have made back then—it's better sometimes to turn these things upside down—and that was to short horses. Frankly, I'm disappointed that the Buffett family was not short horses through this entire period. And we really had no excuse: Living in Nebraska, we would have found it super-easy to borrow horses and avoid a "short squeeze."

● U.S. HORSE POPULATION
1900: **21 million**
1998: **5 million**

The other truly transforming business invention of the first quarter of the century, besides the car, was the airplane—another industry whose plainly brilliant future would have caused investors to salivate. So I went back to check out aircraft manufacturers and found that in the 1919–39 period, there were about 300 companies, only a handful still breathing today. Among the planes made then—we must have been the Silicon Valley of that age—were both the Nebraska and the Omaha, two aircraft that even the most loyal Nebraskan no longer relies upon.

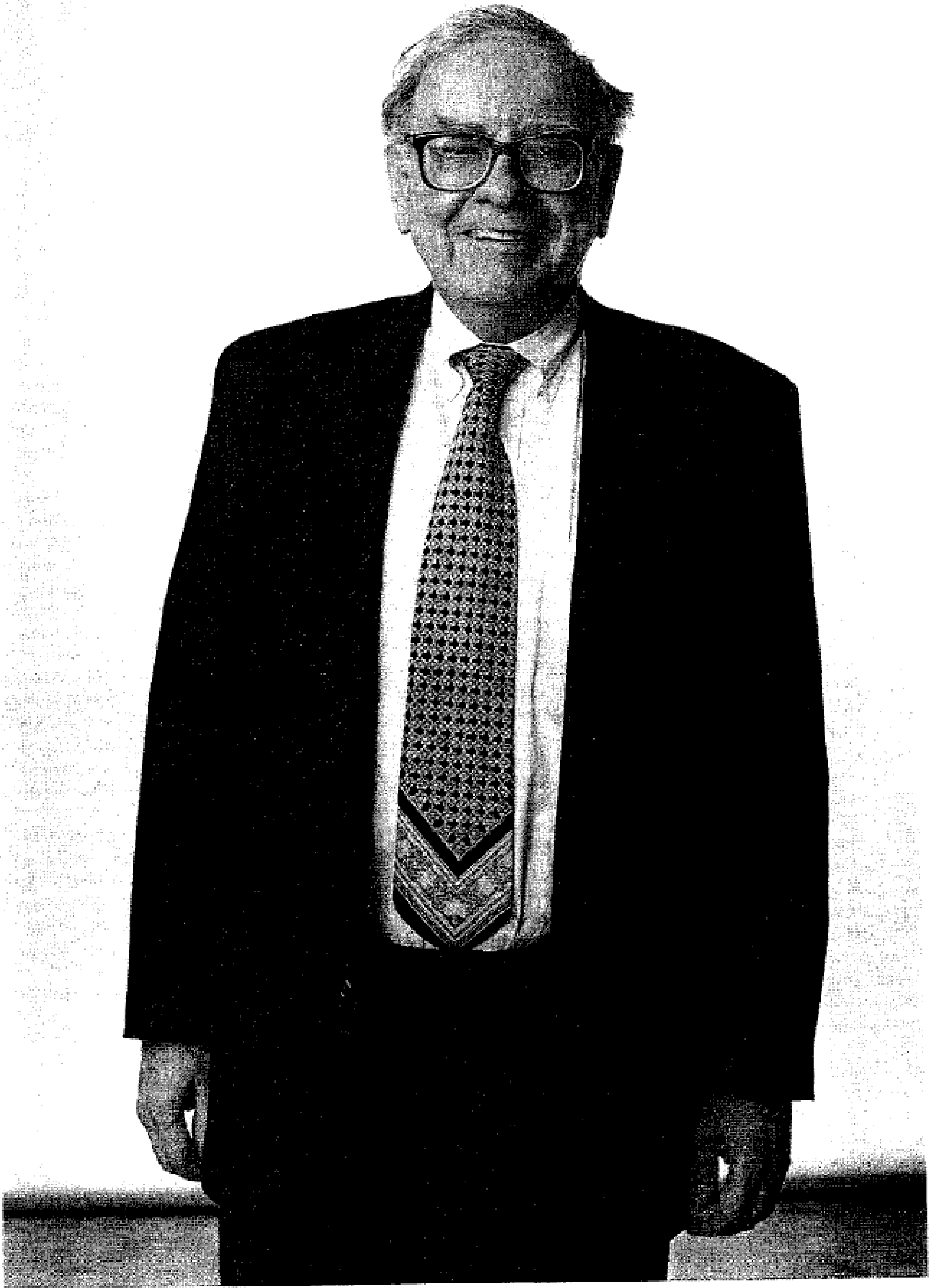
Move on to failures of airlines. Here's a list of 129 airlines that in the past 20 years filed for bankruptcy. Continental was smart enough to make that list twice. As of 1992, in fact—though the picture would have improved since then—the money that had been made since the dawn of aviation by all of this country's airline companies was zero. Absolutely zero.

Sizing all this up, I like to think that if I'd been at Kitty Hawk in 1903 when Orville Wright took off, I would have been farsighted enough, and public-spirited enough—I owed this to future capitalists—to shoot him down. I mean, Karl Marx couldn't have done as much damage to capitalists as Orville did.

I won't dwell on other glamorous businesses that dramatically changed our lives but concurrently failed to deliver rewards to U.S. investors: the manufacture of radios and televisions, for example. But I will draw a lesson from these businesses: The key to investing is not assessing how much an industry is going to affect society, or how much it will grow, but rather determining the competitive advantage of any given company and, above all, the durability of that advantage. The products or services that have wide, sustainable moats around them are the ones that deliver rewards to investors.

This talk of 17-year periods makes me think—incongruously, I admit—of 17-year locusts. What could a current brood of these critters, scheduled to take flight in 2016, expect to encounter? I see them entering a world in which the public is less euphoric about stocks than it is now. Naturally, investors will be feeling disappointment—but only because they started out expecting too much.

Grumpy or not, they will have by then grown considerably wealthier, simply because the American business establishment that they own will have been chugging along, increasing its profits by 3% annually in real terms. Best of all, the rewards from this creation of wealth will have flowed through to Americans in general, who will be enjoying a far higher standard of living than they do today. That wouldn't be a bad world at all—even if it doesn't measure up to what investors got used to in the 17 years just passed. ■



PHOTOGRAPH BY GEORGE LANGE

BUFFETT says investors have an unshakable habit of looking in the rear-view mirror.

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DIGEST, INC.
14 East 4th Street, Suite 501
New York, NY 10012
(212) 777-3330

Outstanding Investor Digest

Lecture by
CHARLES T. MUNGER
to the students of
Professor Guilford Babcock
at the
University of Southern California
School of Business
on April 14, 1994

PERSPECTIVES AND ACTIVITIES OF THE NATION'S MOST SUCCESSFUL MONEY MANAGERS.

Volume X Numbers 1 & 2 May 5, 1995

Investors featured in this Issue:

Other Investors in this Issue:

Companies & Investments in this Issue:

A TRIBUTE TO BENJAMIN GRAHAM AND JANET LOWE'S *BENJAMIN GRAHAM ON VALUE INVESTING*: WARREN BUFFETT, WALTER SCHLOSS, IRVING KAHN, ET AL. "THERE ARE ONLY A FEW IMPORTANT IDEAS — AND THEY'RE ALL IN GRAHAM'S *SECURITY ANALYSIS*."

Nearly 20 years after his death, Ben Graham continues to be a giant on the investment scene — directly through the influence of his books and his virtual creation of the profession of security analysis and indirectly through his influence on a generation of highly successful investors — more than a few of them among our contributors.

For those who missed the opportunity to get to know him

(continued on page 2)

TWEEDY, BROWNE'S CHRIS BROWNE, WILL BROWNE & JOHN SPEARS "WE'RE LOOKING FOR STATISTICAL EXTREMES, AND HERE'S A PORTFOLIO FULL OF 'EM."

Since 1976, when three of four current general partners were in place, TBK Partners has earned a compound annual return of 17.7% before fees and expenses vs. 13.8% for the S&P 500. More fascinating, however, is that their occasional foray into non-U.S. stocks produced a far higher return — over 31% for its average holding from 1983-91 and 27.2% before fees for its international composite vs. 8.0% for the EAFE Index and 7.9% for the Morgan Stanley Europe Index

(continued on page 10)

GLOBALVEST MANAGEMENT'S PETER GRUBER "BRAZIL IS STILL THE CHEAPEST MARKET AROUND — MANY EXAMPLES OF EXTRAORDINARY VALUATIONS."

Under the direction of Globalvest Management's President and Chief Investment Officer, Peter Gruber, Latinvest earned a compound annual return of 47.5% net of all fees versus 14.6% for the IFC Latin America Index during the three years ended December 31, 1994 — placing it on top of *Nelson*'s 3-year rankings for emerging market managers.

If you find those audited figures slightly hard to believe, you may be equally amazed to learn that according to unaudited figures going back to the second quarter of 1987,

(continued on page 40)

WESCO FINANCIAL'S CHARLIE MUNGER "A LESSON ON ELEMENTARY, WORLDLY WISDOM AS IT RELATES TO INVESTMENT MANAGEMENT & BUSINESS."

A particularly astute student of human nature — particularly insofar as it relates to business and investing — Charlie Munger's counsel is highly prized and relied upon by friend and partner Warren Buffett. His insights are equally valued and sought after by more than a few *OID* subscribers and contributors (and editors).

Therefore, we were very pleased to be allowed to sit in on Munger's lecture on "investment expertise as a subdivision

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WESCO FINANCIAL'S
CHARLIE MUNGER
(cont'd from page 1)

of elementary, worldly wisdom" in Professor Guilford Babcock's class at the University of Southern California School of Business last year. We very gratefully acknowledge Munger's generous permission to share it with you.

As always, we highly recommend a very careful reading (and re-reading) of his comments and insights and hope that you find them as valuable as we do:

ALL TOO LITTLE WORLDLY WISDOM IS DELIVERED BY MODERN EDUCATION.

To be a great stock picker, you need some general education.

Charlie Munger: I'm going to play a minor trick on you today — because the subject of my talk is the art of stock picking as a subdivision of the art of worldly wisdom. That enables me to start talking about worldly wisdom — a much broader topic that interests me because I think all too little of it is delivered by modern educational systems, at least in an effective way.

And therefore, the talk is sort of along the lines that some behaviorist psychologists call Grandma's rule — after the wisdom of Grandma when she said that you have to eat the carrots before you get the dessert.

The carrot part of this talk is about the general subject of worldly wisdom which is a pretty good way to start. After all, the theory of modern education is that you need a *general* education before you *specialize*. And I think to some extent, before you're going to be a great stock picker, you need some general education.

So, emphasizing what I sometimes waggishly call *remedial* worldly wisdom, I'm going to start by waltzing you through a few basic notions.

WITHOUT MODELS FROM MULTIPLE DISCIPLINES, YOU'LL FAIL IN BUSINESS AND IN LIFE.

Without a latticework of models, you'll fail in school and life.

Munger: What is elementary, worldly wisdom? Well, the first rule is that you can't really know anything if you just remember isolated facts and try and bang 'em back. If the facts don't hang together on a latticework of theory, you don't have them in a usable form.

You've got to have *models* in your head. And you've got to array your experience — both vicarious and direct — on this latticework of models. You may have noticed students who just try to remember and pound back what is remembered. Well, they fail in school and in life. You've got to hang experience on a latticework of models in your head.

Absent enough models, your brain will torture reality.

Munger: What are the models? Well, the first rule is that you've got to have *multiple* models — because if you just have one or two that you're using, the nature of human psychology is such that you'll *torture* reality so that it fits your models, or at least you'll think it does. You become the equivalent of a chiropractor who, of course, is the great boob in medicine.

It's like the old saying, "To the man with only a hammer, every problem looks like a nail." And of course, that's the way the chiropractor goes about practicing medicine. But that's a perfectly disastrous way to think and a perfectly disastrous way to operate in the world. So you've got to have multiple models.

And the models have to come from multiple disciplines — because all the wisdom of the world is not to be found in one little academic department. That's why poetry professors, by and large, are so unwise in a worldly sense. They don't have enough models in their heads. So you've got to have models across a fair array of disciplines.

Fortunately, it isn't all that tough....

Munger: You may say, "My God, this is already getting way too tough." But, fortunately, it *isn't* that tough — because 80 or 90 important models will carry about 90% of the freight in making you a worldly-wise person. And, of those, only a mere handful really carry very heavy freight.

So let's briefly review what kind of models and techniques constitute this basic knowledge that everybody has to have before they proceed to being really good at a narrow art like stock picking.

YOU'RE GIVING A HUGE ADVANTAGE TO OTHERS IF YOU DON'T LEARN THIS SIMPLE TECHNIQUE.

The great useful model is permutations & combinations.

Munger: First there's mathematics. Obviously, you've got to be able to handle numbers and quantities — basic arithmetic.

And the great useful model, after compound interest, is the elementary math of permutations and combinations. And that was taught in my day in the sophomore year in high school. I suppose by now in great private schools, it's probably down to the eighth grade or so.

It's very simple algebra. It was all worked out in the course of about one year between Pascal and Fermat. They worked it out casually in a series of letters.

Your brain isn't designed to figure it out spontaneously.

Munger: It's not that hard to learn. What *is* hard is to get so you use it routinely almost everyday of your life. The Fermat/Pascal system is dramatically consonant with the way that the world works. And it's fundamental truth. So you simply have to have the technique.

Many educational institutions — although not nearly enough — have realized this. At Harvard Business School, the great quantitative thing that bonds the first-year class together is what they call decision tree theory. All they do is take high school algebra and apply it to real life problems. And the students love it. They're amazed to find that high school algebra works in life....

By and large, as it works out, people can't naturally and automatically do this. If you understand elementary psychology, the reason they can't is really quite simple: The basic neural network of the brain is there through broad genetic and cultural evolution. And it's not Fermat/Pascal. It uses a very crude, shortcut-type of

(continued on next page)

WESCO FINANCIAL'S
CHARLIE MUNGER
(cont'd from preceding page)

approximation. It's got elements of Fermat/Pascal in it. However, it's not good.

Without it, you're giving a huge advantage to others....

Munger: So you have to learn in a very usable way this very elementary math and use it routinely in life — just the way if you want to become a golfer, you can't use the natural swing that broad evolution gave you. You have to *learn* to have a certain grip and swing in a different way to realize your full potential as a golfer.

If you don't get this elementary, but mildly unnatural, mathematics of elementary probability into your repertoire, then you go through a long life like a one-legged man in an ass-kicking contest. You're giving a *huge* advantage to everybody else.

One of the advantages of a fellow like Buffett, whom I've worked with all these years, is that he *automatically* thinks in terms of decision trees and the elementary math of permutations and combinations....

NEXT, YOU HAVE TO KNOW ACCOUNTING — ALONG WITH ITS LIMITATIONS.

Double-entry bookkeeping was a hell of an invention.

Munger: Obviously, you have to know accounting. It's the language of practical business life. It was a *very* useful thing to deliver to civilization. I've heard it came to civilization through Venice which of course was once the great commercial power in the Mediterranean. However, double-entry bookkeeping was a hell of an invention.

And it's not that hard to understand.

But you have to know accounting's limitations....

Munger: But you have to know enough about it to understand its limitations — because although accounting is the starting place, it's only a crude approximation. And it's not very hard to understand its limitations. For example, everyone can see that you have to more or less just guess at the useful life of a jet airplane or anything like that. Just because you express the depreciation rate in neat numbers doesn't make it anything you really know.

In terms of the limitations of accounting, one of my favorite stories involves a very great businessman named Carl Braun who created the CF Braun Engineering Company. It designed and built oil refineries — which is very hard to do. And Braun would get them to come in on time and not blow up and have efficiencies and so forth. This is a major art.

And Braun, being the thorough Teutonic type that he was, had a number of quirks. And one of them was that he took a look at standard accounting and the way it was

(continued in next column)

applied to building oil refineries and he said, "This is asinine."

So he threw all of his accountants out and he took his engineers and said, "Now, we'll devise our *own* system of accounting to handle this process." And in due time, accounting adopted a lot of Carl Braun's notions. So he was a formidably willful and talented man who demonstrated both the importance of accounting and the importance of knowing its limitations.

AN IRON RULE OF WORLDLY WISDOM: ALWAYS, ALWAYS, ALWAYS TELL PEOPLE WHY.

Braun's Five W's: Who, what, where, when and *why*.

Munger: He had another rule, from psychology, which, if you're interested in wisdom, ought to be part of your repertoire — like the elementary mathematics of permutations and combinations.

His rule for all the Braun Company's communications was called the five W's — you had to tell *who* was going to do *what*, *where*, *when* and *why*. And if you wrote a letter or directive in the Braun Company telling somebody to do something, and you didn't tell him why, you could get fired. In fact, you would get fired if you did it twice.

If you tell people why, they'll be much more likely to comply.

Munger: You might ask why that is so important? Well, again that's a rule of psychology. Just as you think better if you array knowledge on a bunch of models that are basically answers to the question, *why, why, why*, if you always tell people why, they'll understand it better, they'll consider it more important, and they'll be more likely to comply. Even if they don't understand your reason, they'll be more likely to comply.

So there's an iron rule that just as you want to start getting worldly wisdom by asking why, why, why, in communicating with other people about everything, you want to include why, why, why. Even if it's obvious, it's wise to stick in the why.

ENGINEERING HAS MORE THAN ITS SHARE OF MODELS. AND THEY'RE THE MOST RELIABLE ONES, AS WELL.

The most reliable models? Engineering models, of course.

Munger: Which models are the most reliable? Well, obviously, the models that come from hard science and engineering are the most reliable models on this Earth. And engineering quality control — at least the guts of it that matters to you and me and people who are not professional engineers — is very much based on the elementary mathematics of Fermat and Pascal:

It costs so much and you get so much less likelihood of it breaking if you spend this much. It's all elementary high school mathematics. And an elaboration of that is what Deming brought to Japan for all of that quality control stuff.

You have to understand normal occurrence distributions.

Munger: I don't think it's necessary for most people to be terribly facile in statistics. For example, I'm not sure that I can even pronounce the Poisson distribution. But I

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(cont'd from preceding page)

know what a Gaussian or normal distribution looks like and I know that events and huge aspects of reality end up distributed that way. So I can do a rough calculation.

But if you ask me to work out something involving a Gaussian distribution to ten decimal points, I can't sit down and do the math. I'm like a poker player who's learned to play pretty well without mastering Pascal.

And by the way, that works well enough. But you have to understand that bell-shaped curve at least roughly as well as I do.

Engineering has more than its share of powerful models....

Munger: And, of course, the engineering idea of a backup system is a very powerful idea. The engineering idea of breakpoints — that's a very powerful model, too. The notion of a critical mass — that comes out of physics — is a very powerful model.

All of these things have great utility in looking at ordinary reality. And all of this cost-benefit analysis — hell, that's all elementary high school algebra, too. It's just been dolled up a little bit with fancy lingo.

THE HUMAN MIND HAS ENORMOUS POWER, BUT IT ALSO HAS STANDARD MISFUNCTIONS.

Our brains take shortcuts. So we're subject to manipulation.

Munger: I suppose the next most reliable models are from biology/physiology because, after all, all of us are programmed by our genetic makeup to be much the same.

And then when you get into psychology, of course, it gets very much more complicated. But it's an ungodly important subject if you're going to have any worldly wisdom.

And you can demonstrate that point quite simply: There's not a person in this room viewing the work of a very ordinary professional magician who *doesn't* see a lot of things happening that *aren't* happening and *not* see a lot of things happening that *are* happening.

And the reason why is that the perceptual apparatus of man has shortcuts in it. The brain cannot have unlimited circuitry. So someone who knows how to take advantage of those shortcuts and cause the brain to miscalculate in certain ways can cause you to see things that aren't there.

Therefore, you must know your brain's limitations.

Munger: Now you get into the cognitive function as distinguished from the perceptual function. And there, you are equally — *more* than equally in fact — likely to be misled. Again, your brain has a shortage of circuitry and so forth — and it's taking all kinds of little automatic shortcuts.

So when circumstances combine in certain ways — or more commonly, your fellow man starts acting like the magician and manipulates you on purpose by causing your cognitive dysfunction — you're a patsy.

And so just as a man working with a tool has to know its limitations, a man working with his cognitive apparatus has to know *its* limitations. And this knowledge, by the way, can be used to control and motivate other people....

Very eminent places miseducate people like you and me.

Munger: So the most useful and practical part of psychology — which I personally think can be taught to any intelligent person in a week — is ungodly important. And nobody taught it to me by the way. I had to learn it later in life, one piece at a time. And it was fairly laborious. It's so elementary though that, when it was all over, I felt like a fool.

And yeah, I'd been educated at Cal Tech and the Harvard Law School and so forth. So very eminent places miseducated people like you and me.

Psychology of misjudgment is terribly important to learn.

Munger: The elementary part of psychology — the psychology of misjudgment, as I call it — is a terribly important thing to learn. There are about 20 little principles. And they interact, so it gets slightly complicated. But the guts of it is *unbelievably* important.

Terribly smart people make totally bonkers mistakes by failing to pay heed to it. In fact, I've done it several times during the last two or three years in a very important way. You never get totally over making silly mistakes.

Man's mind can be manipulated in amazing ways.

Munger: There's another saying that comes from Pascal which I've always considered one of the really accurate observations in the history of thought. Pascal said in essence, "The mind of man at one and the same time is both the glory and the shame of the universe."

And that's exactly right. It has this enormous power. However, it also has these standard misfunctions that often cause it to reach wrong conclusions. It also makes man extraordinarily subject to manipulation by others. For example, roughly half of the army of Adolf Hitler was composed of *believing* Catholics. Given enough clever psychological manipulation, what human beings will do is quite interesting.

Consider the real interests *and* the psychological factors....

Munger: Personally, I've gotten so that I now use a kind of two-track analysis. First, what are the factors that really govern the *interests* involved, rationally considered? And second, what are the *subconscious* influences where the brain at a subconscious level is automatically doing these things — which by and large are useful, but which often misfunction.

One approach is rationality — the way you'd work out a bridge problem: by evaluating the real interests, the real probabilities and so forth. And the other is to evaluate the psychological factors that cause subconscious conclusions — many of which are wrong.

ORGANISMS, PEOPLE & COMPANIES WHO SPECIALIZE CAN GET TERRIBLY GOOD IN THEIR LITTLE NICHE.

Like it or not, the economy is a lot like an ecosystem.

Munger: Now we come to another somewhat less reliable form of human wisdom — microeconomics. And here, I find it quite useful to think of a free market

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(cont'd from preceding page)

economy — or partly free market economy — as sort of the equivalent of an ecosystem....

This is a very unfashionable way of thinking because early in the days after Darwin came along, people like the robber barons assumed that the doctrine of the survival of the fittest authenticated them as deserving power — you know, "I'm the richest. Therefore, I'm the best. God's in his heaven, etc."

And that reaction of the robber barons was so irritating to people that it made it unfashionable to think of an economy as an ecosystem. But the truth is that it *is* a lot like an ecosystem. And you get many of the same results.

In nature and in business, specialization is key.

Munger: Just as in an ecosystem, people who narrowly specialize can get terribly good at occupying some little niche. Just as animals flourish in niches, similarly, people who specialize in the business world — and get very good because they specialize — frequently find good economics that they wouldn't get any other way.

Advantages of scale are ungodly important.

Munger: And once we get into microeconomics, we get into the concept of advantages of scale. Now we're getting closer to investment analysis — because in terms of which businesses succeed and which businesses fail, advantages of scale are ungodly important.

For example, one great advantage of scale taught in all of the business schools of the world is cost reductions along the so-called experience curve. Just *doing* something complicated in more and more volume enables human beings, who are trying to improve and are motivated by the incentives of capitalism, to do it more and more *efficiently*.

The very nature of things is that if you get a whole lot of volume through your joint, you get better at processing that volume. That's an enormous advantage. And it has a lot to do with which businesses succeed and fail....

AND THERE ARE OTHER ECONOMIES: GEOMETRIC, ADVERTISING, INFORMATION, EVEN PSYCHOLOGICAL.

There are even geometric economies of scale.

Munger: Let's go through a list — albeit an incomplete one — of possible advantages of scale. Some come from simple geometry. If you're building a great spherical tank, obviously as you build it bigger, the amount of steel you use in the surface goes up with the square and the cubic volume goes up with the cube. So as you increase the dimensions, you can hold a lot more volume per unit area of steel.

And there are all kinds of things like that where the simple geometry — the simple reality — gives you an advantage of scale.

For example, network TV advertising made the rich richer.

Munger: For example, you can get advantages of scale from TV advertising. When TV advertising first arrived — when talking color pictures first came into our living rooms — it was an unbelievably powerful thing. And in the early days, we had three networks that had whatever it was — say 90% of the audience.

Well, if you were Proctor & Gamble, you could afford to use this new method of advertising. You could afford the very expensive cost of network television because you were selling so many cans and bottles. Some little guy couldn't. And there was no way of buying it in part. Therefore, he couldn't use it. In effect, if you didn't have a big volume, you couldn't use network TV advertising — which was the most effective technique.

So when TV came in, the branded companies that were already big got a *huge* tail wind. Indeed, they prospered and prospered and prospered until some of them got fat and foolish, which happens with prosperity — at least to some people....

The informational advantage of brands is hard to beat.

Munger: And your advantage of scale can be an informational advantage. If I go to some remote place, I may see Wrigley chewing gum alongside Glotz's chewing gum. Well, I know that Wrigley is a satisfactory product, whereas I don't know anything about Glotz's. So if one is 40¢ and the other is 30¢, am I going to take something I don't know and put it in my mouth — which is a pretty personal place, after all — for a lousy dime?

So, in effect, Wrigley, simply by being so well known, has advantages of scale — what you might call an informational advantage.

Everyone is influenced by what others do and approve.

Munger: Another advantage of scale comes from psychology. The psychologists use the term "social proof". We are all influenced — subconsciously and to some extent consciously — by what we see others do and approve. Therefore, if everybody's buying something, we think it's better. We don't like to be the one guy who's out of step.

Again, some of this is at a subconscious level and some of it isn't. Sometimes, we consciously and rationally think, "Gee, I don't know much about this. They know more than I do. Therefore, why shouldn't I follow them?"

All told, your advantages can add up to one tough moat.

Munger: The social proof phenomenon which comes right out of psychology gives huge advantages to scale — for example, with very wide distribution, which of course is hard to get. One advantage of Coca-Cola is that it's *available* almost everywhere in the world.

Well, suppose you have a little soft drink. Exactly how do you make it available all over the Earth? The worldwide distribution setup — which is slowly won by a big enterprise — gets to be a *huge* advantage.... And if you think about it, once you get enough advantages of that type, it can become very hard for anybody to dislodge you.

THINGS TEND TOWARD WINNER TAKE ALL.
THEREFORE, IT PAYS TO BE #1, #2 OR OUT.

Things tend to cascade toward winner-take-all.

Munger: There's *another* kind of advantage to scale. In some businesses, the very nature of things is to sort of cascade toward the overwhelming dominance of one firm.

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The most obvious one is daily newspapers. There's practically no city left in the U.S., aside from a few very big ones, where there's more than one daily newspaper.

And again, that's a scale thing. Once I get most of the circulation, I get most of the advertising. And once I get most of the advertising and circulation, why would anyone want the thinner paper with less information in it? So it tends to cascade to a winner-take-all situation. And that's a separate form of the advantages of scale phenomenon.

Similarly, all these huge advantages of scale allow greater specialization within the firm. Therefore, each person can be better at what he does.

It's not irrational to insist on being #1 or #2 or out.

Munger: And these advantages of scale are so great, for example, that when Jack Welch came into General Electric, he just said, "To hell with it. We're either going to be #1 or #2 in every field we're in or we're going to be out. I don't care how many people I have to fire and what I have to sell. We're going to be #1 or #2 or out."

That was a very tough-minded thing to do, but I think it was a very correct decision if you're thinking about maximizing shareholder wealth. And I don't think it's a bad thing to do for a civilization either, because I think that General Electric is stronger for having Jack Welch there.

HOWEVER, BIGGER ISN'T *ALWAYS* BETTER — THERE ARE ALSO *DIS*ADVANTAGES OF SCALE.

Bigger isn't always better. Sometimes, it's just the reverse....

Munger: And there are also *dis*advantages of scale. For example, we — by which I mean Berkshire Hathaway — are the largest shareholder in Capital Cities/ABC. And we had trade publications there that got murdered — where our competitors beat us. And the way they beat us was by going to a narrower specialization.

We'd have a travel magazine for business travel. So somebody would create one which was addressed solely at corporate travel departments. Like an ecosystem, you're getting a narrower and narrower specialization.

Well, they got much more efficient. They could tell more to the guys who ran corporate travel departments. Plus, they didn't have to waste the ink and paper mailing out stuff that corporate travel departments weren't interested in reading. It was a more efficient system. And they beat our brains out as we relied on our broader magazine.

That's what happened to *The Saturday Evening Post* and all those things. They're gone. What we have now is *Motorcross* — which is read by a bunch of nuts who like to participate in tournaments where they turn somersaults on their motorcycles. But they *care* about it. For them, it's the principle purpose of life. A magazine called *Motorcross* is a total necessity to those people. And its profit margins would make you salivate.

Just think of how narrowcast that kind of publishing is. So occasionally, scaling *down* and intensifying gives you the big advantage. Bigger is not always better.

Another defect of scale — flush, fat, stupid bureaucracy.

Munger: The great defect of scale, of course, which makes the game interesting — so that the big people don't always win — is that as you get big, you get the bureaucracy. And with the bureaucracy comes the territoriality — which is again grounded in human nature.

And the incentives are perverse. For example, if you worked for AT&T in my day, it was a great bureaucracy. Who in the hell was really thinking about the shareholder or anything else? And in a bureaucracy, you think the work is done when it goes out of your in-basket into somebody's else's in-basket. But, of course, it isn't. It's not done until AT&T delivers what it's supposed to deliver. So you get big, fat, dumb, unmotivated bureaucracies.

Bureaucracy's a terrible problem — especially in government.

Munger: They also tend to become somewhat corrupt. In other words, if I've got a department and you've got a department and we kind of share power running this thing, there's sort of an unwritten rule: "If you won't bother me, I won't bother you and we're both happy." So you get layers of management and associated costs that nobody needs. Then, while people are justifying all these layers, it takes forever to get anything done. They're too slow to make decisions and nimbler people run circles around them.

The constant curse of scale is that it leads to big, dumb bureaucracy — which, of course, reaches its highest and worst form in government where the incentives are *really* awful. That doesn't mean we don't need governments — because we do. But it's a *terrible* problem to get big bureaucracies to behave.

Some companies deal with bureaucracies well: e.g., GE.

Munger: So people go to stratagems. They create little decentralized units and fancy motivation and training programs. For example, for a big company, General Electric has fought bureaucracy with amazing skill. But that's because they have a combination of a genius and a fanatic running it. And they put him in young enough so he gets a long run. Of course, that's Jack Welch.

Others don't deal with it very well at all....

Munger: But bureaucracy is terrible.... And as things get very powerful and very big, you can get some *really* dysfunctional behavior. Look at Westinghouse. They blew billions of dollars on a bunch of dumb loans to real estate developers. They put some guy who'd come up by some career path — I don't know exactly what it was, but it could have been refrigerators or something — and all of a sudden, he's loaning money to real estate developers building hotels. It's a very unequal contest. And in due time, they lost all those billions of dollars.

You get a lot of dysfunction in a big, fat, happy place.

Munger: CBS provides an interesting example of another rule of psychology — namely, Pavlovian association. If people tell you what you really don't want to hear — what's unpleasant — there's an almost automatic reaction of antipathy. You have to *train* yourself out of it. It isn't foredestined that you have to be this way. But you will tend to be this way if you don't think about it.

Television was dominated by one network — CBS — in its early days. And Paley was a god. But he didn't like

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to hear what he didn't like to hear. And people soon learned that. So they told Paley only what he liked to hear. Therefore, he was soon living in a little cocoon of unreality and everything else was corrupt — although it was a great business.

So the idiocy that crept into the system was carried along by this huge tide. It was a Mad Hatter's tea party the last ten years under Bill Paley.

And that is not the only example by any means. You can get severe misfunction in the high ranks of business. And of course, if you're investing, it can make a lot of difference. If you take all the acquisitions that CBS made under Paley, after the acquisition of the network itself, with all his advisors — his investment bankers, management consultants and so forth who were getting paid very handsomely — it was absolutely *terrible*.

For example, he gave something like 20% of CBS to the Dumont Company for a television set manufacturer which was destined to go broke. I think it lasted all of two or three years or something like that. So very soon after he'd issued all of that stock, Dumont was history. You get a lot of dysfunction in a big fat, powerful place where no one will bring unwelcome reality to the boss.

An everlasting battle between the pros and cons of size.

Munger: So life is an everlasting battle between those two forces — to get these advantages of scale on one side and a tendency to get a lot like the U.S. Agriculture Department on the other side — where they just sit around and so forth. I don't know exactly what they do. However, I do know that they do very little useful work.

A CASE STUDY IN ECONOMIES VS. DISECONOMIES — WAL-MART VERSUS SEARS, ROEBUCK

A chain store can be a fantastic enterprise.

Munger: On the subject of advantages of economies of scale, I find chain stores quite interesting. Just think about it. The concept of a chain store was a fascinating invention. You get this huge purchasing power — which means that you have lower merchandise costs. You get a whole bunch of little laboratories out there in which you can conduct experiments. And you get specialization.

If one little guy is trying to buy across 27 different merchandise categories influenced by traveling salesmen, he's going to make a lot of poor decisions. But if your buying is done in headquarters for a huge bunch of stores, you can get very bright people that know a lot about refrigerators and so forth to do the buying.

The reverse is demonstrated by the little store where one guy is doing all the buying. It's like the old story about the little store with salt all over its walls. And a stranger comes in and says to the store owner, "You must sell a lot of salt." And he replies, "No, *I* don't. But you should see the guy who *sells* me salt."

So there are huge purchasing advantages. And then there are the slick systems of forcing everyone to do what works. So a chain store can be a fantastic enterprise.

Sam Walton played the game harder and better than anyone.

Munger: It's quite interesting to think about Wal-Mart starting from a single store in Bentonville, Arkansas — against Sears, Roebuck with its name, reputation and all of its billions. How does a guy in Bentonville, Arkansas with no money blow right by Sears, Roebuck? And he does it in his own lifetime — in fact, during his own *late* lifetime because he was already pretty old by the time he started out with one little store....

He played the chain store game harder and better than anyone else. Walton invented practically *nothing*. But he copied everything anybody else ever did that was smart — and he did it with more fanaticism and better employee manipulation. So he just blew right by them all.

And he had a very shrewd strategy....

Munger: He also had a very interesting competitive strategy in the early days. He was like a prize fighter who wanted a great record so he could be in the finals and make a big TV hit. So what did he do? He went out and fought 42 palookas. Right? And the result was knockout, knockout, knockout — 42 times.

Walton, being as shrewd as he was, basically broke other small town merchants in the early days. With his more efficient system, he might not have been able to tackle some titan head-on at the time. But with his better system, he could destroy those small town merchants. And he went around doing it time after time after time. Then, as he got bigger, he started destroying the *big* boys.

Well, that was a very, very shrewd strategy.

I believe that the world is *better* for having Wal-Mart.

Munger: You can say, "Is this a nice way to behave?" Well, capitalism is a pretty brutal place. But I personally think that the world is *better* for having Wal-Mart. I mean you can idealize small town life. But I've spent a fair amount of time in small towns. And let me tell you — you shouldn't get too idealistic about all those businesses he destroyed.

Plus, a lot of people who work at Wal-Mart are very high grade, bouncy people who are raising nice children. I have no feeling that an inferior culture destroyed a superior culture. I think that is nothing more than nostalgia and delusion. But, at any rate, it's an interesting model of how the scale of things and fanaticism combine to be very powerful.

Sears was a classic case study in *diseconomies*.

Munger: And it's also an interesting model on the other side — how with all its great advantages, the disadvantages of bureaucracy did such terrible damage to Sears, Roebuck. Sears had layers and layers of people it didn't need. It was very bureaucratic. It was slow to think. And there was an established way of thinking. If you poked your head up with a new thought, the system kind of turned against you. It was everything in the way of a dysfunctional big bureaucracy that you would expect.

In all fairness, there was also much that was good about it. But it just wasn't as lean and mean and shrewd and effective as Sam Walton. And, in due time, all its advantages of scale were not enough to prevent Sears from losing heavily to Wal-Mart and other similar retailers.

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A MODEL WE'VE HAD TROUBLE WITH — ANTICIPATING COMPETITION AND ITS EFFECTS.

In some markets, no one makes out. In others, everyone does.

Munger: Here's a model that we've had trouble with. Maybe you'll be able to figure it out better. Many markets get down to two or three big competitors — or five or six. And in some of those markets, nobody makes any money to speak of. But in others, everybody does very well.

Over the years, we've tried to figure out why the competition in some markets gets sort of rational from the investor's point of view so that the shareholders do well, and in other markets, there's destructive competition that destroys shareholder wealth.

It's easy to understand why air travel is so unprofitable....

Munger: If it's a pure commodity like airline seats, you can understand why no one makes any money. As we sit here, just think of what airlines have given to the world — safe travel, greater experience, time with your loved ones, you name it. Yet, the net amount of money that's been made by the shareholders of airlines since Kitty Hawk, is now a negative figure — a *substantial* negative figure. Competition was so intense that, once it was unleashed by deregulation, it ravaged shareholder wealth in the airline business.

But *why* is the cereal business so profitable?

Munger: Yet, in other fields — like cereals, for example — almost all the big boys make out. If you're some kind of a medium grade cereal maker, you might make 15% on your capital. And if you're really good, you might make 40%. But why are cereals so profitable — despite the fact that it looks to me like they're competing like crazy with promotions, coupons and everything else? I don't fully understand it.

Obviously, there's a brand identity factor in cereals that doesn't exist in airlines. That *must* be the main factor that accounts for it.

Maybe it boils down to individual psychology....

Munger: And maybe the cereal makers by and large have learned to be less crazy about fighting for market share — because if you get even one person who's hell-bent on gaining market share.... For example, if I were Kellogg and I decided that I had to have 60% of the market, I think I could take most of the profit out of cereals. I'd ruin Kellogg in the process. But I think I could do it.

In some businesses, the participants behave like a demented Kellogg. In other businesses, they don't. Unfortunately, I do not have a perfect model for predicting how that's going to happen.

For example, if you look around at bottler markets, you'll find many markets where bottlers of Pepsi and Coke both make a lot of money and many others where they destroy most of the profitability of the two franchises. That must get down to the peculiarities of individual adjustment to market capitalism. I think you'd have to know the people involved to fully understand what was happening.

A FEW WORDS ON PATENTS, TRADEMARKS AND FRANCHISES.

Patents haven't made people much money — until recently.

Munger: In microeconomics, of course, you've got the concept of patents, trademarks, exclusive franchises and so forth. Patents are quite interesting. When I was young, I think more money went into patents than came out. Judges tended to throw them out — based on arguments about what was really invented and what relied on prior art. That isn't altogether clear.

But they changed that. They didn't change the laws. They just changed the administration — so that it all goes to one patent court. And that court is now very much more pro-patent. So I think people are now starting to make a lot of money out of owning patents.

But trademarks and franchises have always been great.

Munger: Trademarks, of course, have *always* made people a lot of money. A trademark system is a wonderful thing for a big operation if it's well known.

The exclusive franchise can also be wonderful. If there were only three television channels awarded in a big city and you owned one of them, there were only so many hours a day that you could be on. So you had a natural position in an oligopoly in the pre-cable days.

And if you get the franchise for the only food stand in an airport, you have a captive clientele and you have a small monopoly of a sort.

A BASIC LESSON OFTEN FORGOTTEN: NEW TECHNOLOGY CAN KILL YOU.

You have to discern when technology will help and hurt.

Munger: The great lesson in microeconomics is to discriminate between when technology is going to *help* you and when it's going to *kill* you. And most people do not get this straight in their heads. But a fellow like Buffett does.

For example, when we were in the textile business, which is a terrible commodity business, we were making low-end textiles — which are a real commodity product. And one day, the people came to Warren and said, "They've invented a new loom that we think will do twice as much work as our old ones."

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And Warren said, "Gee, I hope this doesn't work — because if it does, I'm going to close the mill." And he *meant* it.

Advances in commodity businesses go to buyers alone.

Munger: What was he thinking? He was thinking, "It's a lousy business. We're earning substandard returns and keeping it open just to be nice to the elderly workers. But we're not going to put huge amounts of *new* capital into a lousy business."

And he knew that the huge productivity increases that would come from a better machine introduced into the production of a commodity product would all go to the benefit of the *buyers* of the textiles. Nothing was going to stick to our ribs as owners.

That's such an obvious concept — that there are all kinds of wonderful new inventions that give you nothing as owners except the opportunity to spend a lot more money in a business that's still going to be lousy. The money still won't come to *you*. *All* of the advantages from great improvements are going to flow through to the customers.

The newspaper business is another matter altogether....

Munger: Conversely, if you own the only newspaper in Oshkosh and they were to invent more efficient ways of composing the whole newspaper, then when you got rid of the old technology and got new fancy computers and so forth, all of the savings would come right through to the bottom line.

A three-year payback often means a 4% per year return.

Munger: In all cases, the people who sell the machinery — and, by and large, even the internal bureaucrats urging you to buy the equipment — show you projections with the amount you'll save at current prices with the new technology. However, they don't do the second step of the analysis — which is to determine how much is going stay home and how much is just going to flow through to the customer. I've never seen a single projection incorporating that second step in my life. And I see them all the time. Rather, they always read: "This capital outlay will save you so much money that it will pay for itself in three years."

So you keep buying things that will pay for themselves in three years. And after 20 years of doing it, somehow you've earned a return of only about 4% per annum. That's the textile business.

And it isn't that the machines weren't better. It's just that the savings didn't go to *you*. The cost reductions came through all right. But the *benefit* of the cost reductions didn't go to the guy who bought the equipment. It's *such* a simple idea. It's so basic. And yet it's so often forgotten.

THE NATIONAL CASH REGISTER MODEL IS EXACTLY WHAT YOU'RE LOOKING FOR.

Early birds have huge advantages....

Munger: Then there's another model from microeconomics which I find very interesting. When technology moves as fast as it does in a civilization like ours, you get a phenomenon which I call competitive destruction. You know, you have the finest buggy whip factory and all of a sudden in comes this little horseless carriage. And before too many years go by, your buggy whip business is dead. You either get into a different business or you're dead — you're destroyed. It happens again and again and again.

And when these new businesses come in, there are *huge* advantages for the early birds. And when you're an early bird, there's a model that I call "surfing" — when a surfer gets up and catches the wave and just stays there, he can go a long, long time. But if he gets off the wave, he becomes mired in shallows....

But people get long runs when they're right on the edge of the wave — whether it's Microsoft or Intel or all kinds of people, including National Cash Register in the early days.

National Cash Register was a lead pipe cinch....

Munger: The cash register was one of the great contributions to civilization. It's a wonderful story. Patterson was a small retail merchant who didn't make any money. One day, somebody sold him a crude cash register which he put into his retail operation. And it instantly changed from losing money to earning a profit because it made it so much harder for the employees to steal....

But Patterson, having the kind of mind that he did, didn't think, "Oh, good for my retail business." He thought, "I'm going into the cash register business." And, of course, he created National Cash Register.

And he "surfed". He got the best distribution system, the biggest collection of patents and the best of everything. He was a *fanatic* about everything important as the technology developed. I have in my files an early National Cash Register Company report in which Patterson described his methods and objectives. And a well-educated orangutan could see that buying into partnership with Patterson in those early days, given his notions about the cash register business, was a total 100% cinch.

And, of course, that's exactly what an investor should be looking for. In a long life, you can expect to profit heavily from at least a few of those opportunities if you develop the wisdom and will to seize them. At any rate, "surfing" is a very powerful model.

FIGURE OUT WHERE YOU HAVE AN EDGE THEN, PLAY THERE AND *ONLY* THERE.

If we don't believe we have an advantage, we don't play.

Munger: However, Berkshire Hathaway, by and large, does not invest in these people that are "surfing" on complicated technology. After all, we're cranky and idiosyncratic — as you may have noticed.

And Warren and I don't feel like we have any great advantage in the high-tech sector. In fact, we feel like we're at a big *dis*advantage in trying to understand the nature of technical developments in software, computer chips or what have you. So we tend to avoid that stuff, based on our personal inadequacies.

Figure out where you have an edge — and *stay* there.

Munger: Again, that is a very, very powerful idea.

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Every person is going to have a circle of competence. And it's going to be very hard to advance that circle. If I had to make my living as a musician.... I can't even *think* of a level low enough to describe where I would be sorted out to if music were the measuring standard of the civilization.

So you have to figure out what your own aptitudes are. If you play games where other people have the aptitudes and you don't, you're going to lose. And that's as close to certain as any prediction that you can make. You have to figure out where *you've* got an edge. And you've got to play within your *own* circle of competence.

Life is much like trying to be a good plumbing contractor.

Munger: If you want to be the best tennis player in the world, you may start out trying and soon find out that it's hopeless — that other people blow right by you. However, if you want to become the best plumbing contractor in Bemidji, that is probably doable by two-thirds of you. It takes a will. It takes the intelligence. But after a while, you'd gradually know all about the plumbing business in Bemidji and *master* the art. That is an attainable objective, given enough discipline. And people who could never win a chess tournament or stand in center court in a respectable tennis tournament can rise quite high in life by slowly developing a circle of competence — which results partly from what they were born with and partly from what they slowly develop through work.

So some edges can be acquired. And the game of life to some extent for most of us is trying to be something like a good plumbing contractor in Bemidji. Very few of us are chosen to win the world's chess tournaments.

[Editor's note: Munger's comments remind your editor of Buffett's comments in John Train's *The Money Masters*. Buffett asks Train, "How do you beat Bobby Fisher?" Answer: "Play him in anything but chess."]

One person's garbage is another's treasure.

Munger: Some of you may find opportunities "surfing" along in the new high-tech fields — the Intels, the Microsofts and so on. The fact that we don't think we're very good at it and have pretty well stayed out of it doesn't mean that it's irrational for you to do it.

TO A MAN WITH PROFICIENCY IN MATH, EFFICIENT MARKET THEORY LOOKS LIKE A NAIL.

On to dessert — the selection of common stocks....

Munger: Well, so much for the basic microeconomic models, a little bit of psychology, a little bit of mathematics, helping create what I call the general substructure of worldly wisdom. Now, if you want to go on from carrots to dessert, I'll turn to stock picking — trying to draw on this general worldly wisdom as we go.

I don't want to get into emerging markets, bond arbitrage and so forth. I'm talking about nothing but plain vanilla stock picking. That, believe me, is complicated enough. And I'm talking about *common* stock picking.

Do as I do, not as I say....

Munger: The first question is, "What is the nature of the stock market?" And that gets you directly to this efficient market theory that got to be the rage — a *total* rage — long after I graduated from law school.

And it's rather interesting because one of the greatest economists of the world is a substantial shareholder in Berkshire Hathaway and has been for a long time. His textbook always taught that the stock market was perfectly efficient and that nobody could beat it. But his *own* money went into Berkshire and made him wealthy. So, like Pascal in his famous wager, he hedged his bet.

The iron rule of life: Only 20% of us can be in the top 5th.

Munger: Is the stock market so efficient that people can't beat it? Well, the efficient market theory is obviously *roughly* right — meaning that markets are *quite* efficient and it's *quite* hard for anybody to beat the market by significant margins as a stock picker by just being intelligent and working in a disciplined way.

Indeed, the average result has to be the average result. By definition, *everybody* can't beat the market. As I always say, the iron rule of life is that only 20% of the people can be in the top fifth. That's just the way it is. So the answer is that it's partly efficient and partly inefficient.

Efficient market theory is seductive. Only it's not true....

Munger: And, by the way, I have a name for people who went to the extreme efficient market theory — which is "bonkers". It was an intellectually consistent theory that enabled them to do pretty mathematics. So I understand its seductiveness to people with large mathematical gifts. It just had a difficulty in that the fundamental assumption did not tie properly to reality.

Again, to the man with a hammer, every problem looks like a nail. If you're good at manipulating higher mathematics in a consistent way, why not make an assumption which enables you to use your tool?

BETTING ON HORSES AND PICKING STOCKS HAVE MORE THAN A LITTLE IN COMMON.

Odds on horses and stocks are set by the market.

Munger: The model I like — to sort of simplify the notion of what goes on in a market for common stocks — is the pari-mutuel system at the race track. If you stop to think about it, a pari-mutuel system is a *market*. Everybody goes there and bets and the odds change based on what's bet. That's what happens in the stock market.

Any damn fool can see that a horse carrying a light weight with a wonderful win rate and a good post position etc., etc. is way more likely to win than a horse with a terrible record and extra weight and so on and so on. But if you look at the odds, the bad horse pays 100 to 1, whereas the good horse pays 3 to 2. Then it's not clear which is statistically the best bet using the mathematics of Fermat and Pascal. The prices have changed in such a way that it's very hard to beat the system.

And then the track is taking 17% off the top. So not

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only do you have to outwit all the other betters, but you've got to outwit them by such a big margin that on average, you can afford to take 17% of your gross bets off the top and give it to the house before the rest of your money can be put to work.

Believe it or not, some people make money betting horses.

Munger: Given those mathematics, is it possible to beat the horses only using one's intelligence? Intelligence should give some edge, because lots of people who don't know anything go out and bet lucky numbers and so forth. Therefore, somebody who really thinks about nothing but horse performance and is shrewd and mathematical could have a very considerable edge, in the absence of the frictional cost caused by the house take.

Unfortunately, what a shrewd horseplayer's edge does in most cases is to reduce his average loss over a season of betting from the 17% that he would lose if he got the average result to maybe 10%. However, there are actually a few people who can beat the game after paying the full 17%.

I used to play poker when I was young with a guy who made a substantial living doing nothing but bet harness races.... Now, harness racing is a relatively inefficient market. You don't have the depth of intelligence betting on harness races that you do on regular races. What my poker pal would do was to think about harness races as his main profession. And he would bet only *occasionally* when he saw some mispriced bet available. And by doing that, after paying the full handle to the house — which I presume was around 17% — he made a substantial living.

You have to say that's rare. However, the market was not perfectly efficient. And if it weren't for that big 17% handle, lots of people would regularly be beating lots of other people at the horse races. It's efficient, yes. But it's not *perfectly* efficient. And with enough shrewdness and fanaticism, some people will get better results than others.

It ain't easy, but it's possible, to outperform in stocks, too.

Munger: The stock market is the same way — except that the house handle is so much lower. If you take transaction costs — the spread between the bid and the ask plus the commissions — and if you don't trade too actively, you're talking about fairly low transaction costs. So that with enough fanaticism and enough discipline, some of the shrewd people are going to get way better results than average in the nature of things.

It is not a bit easy. And, of course, 50% will end up in the bottom half and 70% will end up in the bottom 70%. But *some* people will have an advantage. And in a fairly low transaction cost operation, they will get better than average results in stock picking.

What works betting horses also works for stock picking.

Munger: How do you get to be one of those who is a winner — in a relative sense — instead of a loser?

Here again, look at the pari-mutuel system. I had dinner last night by absolute accident with the president of Santa Anita. He says that there are two or three betters who have a credit arrangement with them, now that they have off-track betting, who are actually beating the house. They're sending money out net after the full handle — a lot of it to Las Vegas, by the way — to people who are actually winning slightly, net, after paying the full handle. They're that shrewd about something with as much unpredictability as horse racing.

And the one thing that all those winning betters in the whole history of people who've beaten the pari-mutuel system have is quite simple. They bet very seldom.

Winners bet big when they have the odds — otherwise, never.

Munger: It's not given to human beings to have such talent that they can just know everything about everything all the time. But it *is* given to human beings who work hard at it — who look and sift the world for a mispriced bet — that they can *occasionally* find one.

And the wise ones bet *heavily* when the world offers them that opportunity. They bet big when they have the odds. And the rest of the time, they don't. It's just that simple.

AS USUAL, IN HUMAN AFFAIRS
WHAT WINS ARE INCENTIVES.

It's obvious to us. And yet nobody operates that way.

Munger: That is a *very* simple concept. And to me it's obviously right — based on experience not only from the pari-mutuel system, but everywhere else.

And yet, in investment management, practically *nobody* operates that way. *We* operate that way — I'm talking about Buffett and Munger. And we're not alone in the world. But a huge majority of people have some other crazy construct in their heads. And instead of waiting for a near cinch and loading up, they apparently ascribe to the theory that if they work a little harder or hire more business school students, they'll come to know everything about everything all the time.

To me, that's totally insane. The way to win is to work, work, work, work and hope to have a few insights.

Most of Berkshire's billions came from a handful of ideas.

Munger: How many insights do you need? Well, I'd argue that you don't need many in a lifetime. If you look at Berkshire Hathaway and all of its accumulated billions, the top ten insights account for most of it. And that's with a very brilliant man — Warren's a lot more able than I am and very disciplined — devoting his lifetime to it. I don't mean to say that he's only had ten insights. I'm just saying that most of the money came from ten insights.

So you can get very remarkable investment results if you think more like a winning pari-mutuel player. Just think of it as a heavy odds against game full of craziness with an occasional mispriced something or other. And you're probably not going to be smart enough to find thousands in a lifetime. And when you get a few, you really load up. It's just that simple.

A simple but powerful way to improve your results....

Munger: When Warren lectures at business schools, he says, "I could improve your ultimate financial welfare by giving you a ticket with only 20 slots in it so that you had 20 punches — representing all the investments that you

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got to make in a lifetime. And once you'd punched through the card, you couldn't make any more investments at all."

He says, "Under those rules, you'd really think carefully about what you did and you'd be forced to load up on what you'd really thought about. So you'd do so much better."

As long as clients buy salt, investment managers will sell it.

Munger: Again, this is a concept that seems perfectly obvious to me. And to Warren, it seems perfectly obvious. But this is one of the very few business classes in the U.S. where anybody will be saying so. It just isn't the conventional wisdom.

To me, it's obvious that the winner has to bet very selectively. It's been obvious to me since very early in life. I don't know why it's not obvious to very many other people.

I think the reason why we got into such idiocy in investment management is best illustrated by a story that I tell about the guy who sold fishing tackle. I asked him, "My God, they're purple and green. Do fish really take these lures?" And he said, "Mister, I don't sell to fish."

Investment managers are in the position of that fishing tackle salesman. They're like the guy who was selling salt to the guy who already had too much salt. And as long as the guy will *buy* salt, why they'll *sell* salt. But that isn't what ordinarily works for the *buyer* of investment advice.

As usual, in human affairs, what wins are incentives.

Munger: If you invested Berkshire Hathaway-style, it would be hard to get *paid* as an investment manager as well as they're currently paid — because you'd be holding a block of Wal-Mart and a block of Coca-Cola and a block of something else. You'd just sit there. And the client would be getting rich. And, after a while, the client would think, "Why am I paying this guy half a percent a year on my wonderful passive holdings?"

So what makes sense for the investor is different from what makes sense for the manager. And, as usual in human affairs, what determines the behavior are incentives for the decision maker.

Getting the incentives right is a very, very important lesson.

Munger: From all business, my favorite case on incentives is Federal Express. The heart and soul of their system — which creates the integrity of the product — is having all their airplanes come to one place in the middle of the night and shift all the packages from plane to plane. If there are delays, the whole operation can't deliver a product full of integrity to Federal Express customers.

And it was always screwed up. They could never get it done on time. They tried everything — moral suasion, threats, you name it. And nothing worked.

Finally, somebody got the idea to pay all these people not so much an *hour*, but so much a *shift* — and when it's all done, they can all go home. Well, their problems cleared up overnight.

So getting the incentives right is a very, very important lesson. It was not obvious to Federal Express what the solution was. But maybe now, it will hereafter more often be obvious to you.

IF SECTOR ROTATION IS VERY LUCRATIVE, WE'VE NEVER SEEN THE EVIDENCE.

Once you factor in the odds, the market isn't easy to beat.

Munger: All right, we've now recognized that the market is efficient as a pari-mutuel system is efficient — with the favorite more likely than the long shot to do well in racing, but not necessarily give any betting advantage to those that bet on the favorite.

In the stock market, some railroad that's beset by better competitors and tough unions may be available at one-third of its book value. In contrast, IBM in its heyday might be selling at 6 times book value. So it's just like the pari-mutuel system. Any damn fool could plainly see that IBM had better business prospects than the railroad. But once you put the *price* into the formula, it wasn't so clear anymore what was going to work best for a buyer choosing between the stocks. So it's a lot like a pari-mutuel system. And, therefore, it gets very hard to beat.

I know of no really rich "sector rotators"....

Munger: What style should the investor use as a picker of common stocks in order to try to beat the market — in other words, to get an above average long-term result? A standard technique that appeals to a lot of people is called "sector rotation". You simply figure out when oils are going to outperform retailers, etc., etc., etc. You just kind of flit around being in the hot sector of the market making better choices than other people. And presumably, over a long period of time, you get ahead.

However, I know of no really rich sector rotator. Maybe some people can do it. I'm not saying they can't. All I know is that all the people *I* know who got rich — and I know a lot of them — did *not* do it that way.

RICH OR POOR, IT'S GOOD TO HAVE A HUGE MARGIN OF SAFETY.

A significant discount = more upside + a margin of safety.

Munger: The second basic approach is the one that Ben Graham used — much admired by Warren and me. As one factor, Graham had this concept of value to a private owner — what the whole enterprise would sell for if it were available. And that was calculable in many cases.

Then, if you could take the stock price and multiply it by the number of shares and get something that was one third or less of sellout value, he would say that you've got a lot of edge going for you. Even with an elderly alcoholic running a stodgy business, this significant excess of real value per share working for you means that all kinds of good things can happen to you. You had a *huge* margin of safety — as he put it — by having this big excess value going for you.

The aftermath of the 1930s was a bargain hunter's dream.

Munger: But he was, by and large, operating when the world was in shell-shock from the 1930s — which was the worst contraction in the English-speaking world in about 600 years. Wheat in Liverpool, I believe, got down to something like a 600-year low, adjusted for inflation. People were so shell-shocked for a long time thereafter that

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Ben Graham could run his Geiger counter over this detritus from the collapse of the 1930s and find things selling below their working capital per share and so on.

Today, stated assets evaporate at the first sign of trouble.

Munger: And in those days, working capital actually belonged to the shareholders. If the employees were no longer useful, you just sacked them all, took the working capital and stuck it in the owners' pockets. That was the way capitalism then worked.

Nowadays, of course, the accounting is not realistic — because the minute the business starts contracting, significant assets are not there. Under social norms and the new legal rules of the civilization, so much is owed to the employees that, the minute the enterprise goes into reverse, some of the assets on the balance sheet aren't *there* anymore.

Strange things can happen in the technology area.

Munger: Now, that might not be true if you run a little auto dealership yourself. You may be able to run it in such a way that there's no health plan and this and that so that if the business gets lousy, you can take your working capital and go home. But IBM can't, or at least didn't. Just look at what disappeared from its balance sheet when it decided that it had to change size both because the world had changed technologically and because its market position had deteriorated.

And in terms of blowing it, IBM is some example. Those were brilliant, disciplined people. But there was enough turmoil in technological change that IBM got bounced off the wave after "surfing" successfully for 60 years. And that was some collapse — an object lesson in the difficulties of technology and one of the reasons why Buffett and Munger don't like technology very much. We don't think we're any good at it, and strange things can happen.

One way to keep finding "bargains" is to redefine the term.

Munger: At any rate, the trouble with what I call the classic Ben Graham concept is that gradually the world wised up and those real obvious bargains disappeared. You could run your Geiger counter over the rubble and it wouldn't click.

But such is the nature of people who have a hammer — to whom, as I mentioned, every problem looks like a nail —

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that the Ben Graham followers responded by changing the calibration on their Geiger counters. In effect, they started defining a bargain in a different way. And they kept changing the definition so that they could keep doing what they'd always done. And it *still* worked pretty well. So the Ben Graham intellectual system was a very good one.

Having an unstable business partner has its rewards.

Munger: Of course, the best part of it all was his concept of "Mr. Market". Instead of thinking the market was efficient, he treated it as a manic-depressive who comes by every day. And some days he says, "I'll sell you some of my interest for way less than you think it's worth." And other days, "Mr. Market" comes by and says, "I'll buy your interest at a price that's way higher than you think it's worth." And *you* get the *option* of deciding whether you want to buy more, sell part of what you already have or do nothing at all.

To Graham, it was a blessing to be in business with a manic-depressive who gave you this series of options all the time. That was a very significant mental construct. And it's been very useful to Buffett, for instance, over his whole adult lifetime.

GRAHAM WASN'T *TRYING* TO PLAY OUR GAME — I.E., PAYING UP FOR BETTER BUSINESSES.

Ben Graham wasn't *trying* to do what we did.

Munger: However, if we'd stayed with classic Graham the way Ben Graham did it, we would never have had the record we have. And that's because Graham wasn't *trying* to do what we did.

For example, Graham didn't want to ever talk to management. And his reason was that, like the best sort of professor aiming his teaching at a mass audience, he was trying to invent a system that *anybody* could use. And he didn't feel that the man in the street could run around and talk to managements and learn things. He also had a concept that the management would often couch the information very shrewdly to mislead. Therefore, it was very difficult. And that is still true, of course — human nature being what it is.

Our leap — paying up for quality....

Munger: And so having started out as Grahamites — which, by the way, worked fine — we gradually got what I would call better insights. And we realized that some company that was selling at 2 or 3 times book value could *still* be a hell of a bargain because of momentums implicit in its position, sometimes combined with an unusual managerial skill plainly present in some individual or other, or some system or other.

And once we'd gotten over the hurdle of recognizing that a thing could be a bargain based on quantitative measures that would have *horrified* Graham, we started thinking about better businesses.

Bulk of Berkshire's billions brought by better businesses.

Munger: And, by the way, the bulk of the billions in Berkshire Hathaway have come from the better businesses. Much of the first $200 or $300 million came from scrambling around with our Geiger counter. But the great

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bulk of the money has come from the great businesses.

And even some of the early money was made by being temporarily present in great businesses. Buffett Partnership, for example, owned American Express and Disney when they got pounded down.

FROM THE VIEWPOINT OF A RATIONAL CLIENT, INVESTMENT MANAGEMENT TODAY IS BONKERS.

A tremendous advantage at Berkshire — no clients.

Munger: [Most investment managers are] in a game where the clients expect them to know a lot about a lot of things. We didn't have any clients who could fire us at Berkshire Hathaway. So we didn't have to be governed by any such construct. And we came to this notion of finding a mispriced bet and loading up when we were very confident that we were right. So we're way less diversified. And I think our system is miles better.

However, in all fairness, I don't think [a lot of money managers] could successfully sell their services if they used our system. But if you're investing for 40 years in some pension fund, what difference does it make if the path from start to finish is a little more bumpy or a little different than everybody else's so long as it's all going to work out well in the end? So what if there's a little extra volatility.

Investment management today is really hobbling itself....

Munger: In investment management today, everybody wants not only to win, but to have a yearly outcome path that never diverges very much from a standard path except on the upside. Well, that is a very artificial, crazy construct. That's the equivalent in investment management to the custom of binding the feet of Chinese women. It's the equivalent of what Nietzsche meant when he criticized the man who had a lame leg and was proud of it.

That is really hobbling yourself. Now, investment managers would say, "We *have* to be that way. That's how we're *measured*." And they may be right in terms of the way the business is now constructed. But from the viewpoint of a rational consumer, the whole system's "bonkers" and draws a lot of talented people into socially useless activity.

IF YOU DON'T LOAD UP ON GREAT OPPORTUNITIES, THEN YOU'RE MAKING A BIG MISTAKE.

It's much better to attempt something attainable.

Munger: And the Berkshire system is *not* "bonkers". It's *so* damned elementary that even bright people are going to have limited, really valuable insights in a very competitive world when they're fighting against other very bright, hardworking people.

And it makes sense to load up on the very few good insights you have instead of pretending to know everything about everything at all times. You're much more likely to do well if you start out to do something *feasible* instead of something that isn't feasible. Isn't that perfectly obvious?

How many of you have 56 brilliant insights in which you have equal confidence? Raise your hands, please. How many of you have two or three insights that you have some confidence in? I rest my case.

I'd say that Berkshire Hathaway's system is adapting to the nature of the investment problem as it really is.

The trick is getting into better businesses.

Munger: We've really made the money out of high quality businesses. In some cases, we bought the whole business. And in some cases, we just bought a big block of stock. But when you analyze what happened, the big money's been made in the high quality businesses. And *most* of the other people who've made a lot of money have done so in high quality businesses.

Over the long term, it's hard for a stock to earn a much better return than the business which underlies it earns. If the business earns 6% on capital over 40 years and you hold it for that 40 years, you're not going to make much different than a 6% return — even if you originally buy it at a huge discount. Conversely, if a business earns 18% on capital over 20 or 30 years, even if you pay an expensive looking price, you'll end up with a fine result.

Finding 'em small is a very beguiling idea....

Munger: So the trick is getting into better businesses. And that involves all of these advantages of scale that you could consider momentum effects.

How do you get into these great companies? One method is what I'd call the method of finding them small — get 'em when they're little. For example, buy Wal-Mart when Sam Walton first goes public and so forth. And a lot of people try to do just that. And it's a very beguiling idea. If I were a young man, I might actually go into it.

We have to buy 'em big. And it gets harder all the time.

Munger: But it doesn't work for Berkshire Hathaway anymore because we've got too much money. We can't find anything that fits our size parameter that way. Besides, we're set in our ways. But I regard finding them small as a perfectly intelligent approach for somebody to try with discipline. It's just not something that I've done.

Finding 'em big obviously is very hard because of the competition. So far, Berkshire's managed to do it. But can we continue to do it? What's the next Coca-Cola investment for us? Well, the answer to that is I don't know. I think it gets harder for us all the time....

Not loading up on great opportunities is a big mistake.

Munger: And ideally — and we've done a lot of this — you get into a great business which also has a great manager because management matters. For example, it's made a great difference to General Electric that Jack Welch came in instead of the guy who took over Westinghouse — a very great difference. So management matters, too.

And some of it is predictable. I do not think it takes a genius to understand that Jack Welch was a more insightful person and a better manager than his peers in other companies. Nor do I think it took tremendous genius to understand that Disney had basic momentums in place which are very powerful and that Eisner and Wells were very unusual managers.

So you do get an occasional opportunity to get into a wonderful business that's being run by a wonderful manager.

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And, of course, that's hog heaven day. If you don't load up when you get those opportunities, it's a *big* mistake.

It's usually better to bet on the business than the manager....

Munger: Occasionally, you'll find a human being who's so talented that he can do things that ordinary skilled mortals can't. I would argue that Simon Marks — who was second generation in Marks & Spencer of England — was such a man. Patterson was such a man at National Cash Register. And Sam Walton was such a man.

These people do come along — and in many cases, they're not all that hard to identify. If they've got a reasonable hand — with the fanaticism and intelligence and so on that these people generally bring to the party — then management can matter much.

However, averaged out, betting on the quality of a business is better than betting on the quality of management. In other words, if you have to choose one, bet on the business momentum, not the brilliance of the manager.

But, very rarely, you find a manager who's so good that you're wise to follow him into what looks like a mediocre business.

MAKE A FEW GREAT INVESTMENTS AND SIT ON YOUR ASSETS....

There are *huge* mathematical advantages to doing nothing.

Munger: Another very simple effect I very seldom see discussed either by investment managers or anybody else is the effect of taxes. If you're going to buy something which compounds for 30 years at 15% per annum and you pay one 35% tax at the very end, the way that works out is that after taxes, you keep 13.3% per annum.

In contrast, if you bought the same investment, but had to pay taxes every year of 35% out of the 15% that you earned, then your return would be 15% minus 35% of 15% — or only 9.75% per year compounded. So the difference there is over 3.5%. And what 3.5% does to the numbers over long holding periods like 30 years is truly eye-opening. If you sit back for long, long stretches in great companies, you can get a huge edge from nothing but the way that income taxes work.

Even with a 10% per annum investment, paying a 35% tax at the end gives you 8.3% after taxes as an annual compounded result after 30 years. In contrast, if you pay the 35% each year instead of at the end, your annual result goes down to 6.5%. So you add nearly 2% of after-tax return per annum if you only achieve an average return by historical standards from common stock investments in companies with tiny dividend payout ratios.

Tax-related motivations have led to many big boners.

Munger: But in terms of business mistakes that I've seen over a long lifetime, I would say that trying to minimize taxes too much is one of the great standard causes of really dumb mistakes. I see *terrible* mistakes from people being overly motivated by tax considerations.

Warren and I personally don't drill oil wells. We pay our taxes. And we've done pretty well, so far. Anytime somebody offers you a tax shelter from here on in life, my advice would be don't buy it.

In fact, any time anybody offers you *anything* with a big commission and a 200-page prospectus, don't buy it. Occasionally, you'll be wrong if you adopt "Munger's Rule". However, over a lifetime, you'll be a long way ahead — and you will miss a lot of unhappy experiences that might otherwise reduce your love for your fellow man.

Make a few great investments and sit on your assets....

Munger: There are *huge* advantages for an individual to get into a position where you make a few great investments and just sit back and wait: You're paying less to brokers. You're listening to less nonsense. And if it works, the governmental tax system gives you an extra 1, 2 or 3 percentage points per annum compounded.

And you think that most of you are going to get that much advantage by hiring investment counselors and paying them 1% to run around, incurring a lot of taxes on your behalf? Lots of luck.

Great companies' stock prices often reflect their quality.

Munger: Are there any dangers in this philosophy? Yes. Everything in life has dangers. Since it's so obvious that investing in great companies works, it gets horribly overdone from time to time. In the "Nifty-Fifty" days, everybody could tell which companies were the great ones. So they got up to 50, 60 and 70 times earnings. And just as IBM fell off the wave, other companies did, too. Thus, a large investment disaster resulted from too high prices. And you've got to be aware of that danger....

So there are risks. Nothing is automatic and easy. But if you can find some fairly-priced great company and buy it and sit, that tends to work out very, very well indeed — especially for an individual.

AND THERE'S THE ULTIMATE NO-BRAINER — LIKE FINDING MONEY IN THE STREET.

The ultimate no-brainer....

Munger: Within the growth stock model, there's a sub-position: There are actually businesses, that you will find a few times in a lifetime, where any manager could raise the return enormously just by raising prices — and yet they haven't done it. So they have *huge* untapped pricing power that they're not using. That is the *ultimate* no-brainer.

That existed in Disney. It's such a unique experience to take your grandchild to Disneyland. You're not doing it that often. And there are lots of people in the country. And Disney found that it could raise those prices a lot and the attendance stayed right up.

So a lot of the great record of Eisner and Wells was utter brilliance but the rest came from just raising prices at Disneyland and Disneyworld and through video cassette sales of classic animated movies.

Coca-Cola had it all. It was *perfect*....

Munger: At Berkshire Hathaway, Warren and I raised the prices of See's Candy a little faster than others might have. And, of course, we invested in Coca-Cola — which had some untapped pricing power. And it also had brilliant

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management. So a Goizueta and Keough could do much more than raise prices. It was *perfect*.

You will occasionally find money in the street.

Munger: You will get a few opportunities to profit from finding underpricing. There are actually people out there who don't price everything as high as the market will easily stand. And once you figure that out, it's like finding money in the street — if you have the courage of your convictions.

MODELS FROM BERKSHIRE HATHAWAY INVESTMENTS: COKE, GILLETTE, GEICO & THE WASHINGTON POST

Model #1: Betting on newspapers in two newspaper towns.

Munger: If you look at Berkshire's investments where a lot of the money's been made and you look for the models, you can see that we twice bought into two-newspaper towns which have since become one-newspaper towns. So we made a bet to some extent....

The Washington Post was a rare opportunity indeed.

Munger: In one of those — The Washington Post — we bought it at about 20% of the value to a private owner. So we bought it on a Ben Graham-style basis — at one-fifth of obvious value — and, in addition, we faced a situation where you had both the top hand in a game that was clearly going to end up with one winner and a management with a lot of integrity and intelligence. That one was a real dream. They're very high class people — the Katharine Graham family. That's why it was a dream — an absolute, damn dream.

Of course, that came about back in '73-'74. And that was almost like 1932. That was probably a once-in-40-years-type denouement in the markets. That investment's up about 50 times over our cost. If I were you, I wouldn't count on getting any investment in your lifetime quite as good as The Washington Post was in '73 and '74.

But it doesn't *have* to be that good to take care of you.

Model #2: A low-priced item + a global marketing advantage.

Munger: Let me mention another model. Of course, Gillette and Coke make fairly low-priced items and have a tremendous marketing advantage all over the world. And in Gillette's case, they keep surfing along new technology which is fairly simple by the standards of microchips. But it's hard for competitors to do.

So they've been able to stay constantly near the edge of improvements in shaving. There are whole countries where Gillette has more than 90% of the shaving market.

Model #3: The cancer surgery formula — a la GEICO.

Munger: GEICO is a very interesting model. It's another one of the 100 or so models you ought to have in your head. I've had many friends in the sick-business-fix-up game over a long lifetime. And they practically all use the following formula — I call it the cancer surgery formula:

They look at this mess. And they figure out if there's anything sound left that can live on its own if they cut away everything else. And if they find anything sound, they just cut away everything else. Of course, if that doesn't work, they liquidate the business. But it frequently does work.

And GEICO had a perfectly *magnificent* business — submerged in a mess, but still working. Misled by success, GEICO had done some foolish things. They got to thinking that, because they were making a lot of money, they knew everything. And they suffered huge losses.

All they had to do was to cut out all the folly and go back to the perfectly wonderful business that was lying there. And when you think about it, that's a very simple model. And it's repeated over and over again.

And, in GEICO's case, think about all the money we passively made.... It was a wonderful business combined with a bunch of foolishness that could easily be cut out. And people were coming in who were temperamentally and intellectually designed so they were going to cut it out. That is a model you want to look for.

And you may find one or two or three in a long lifetime that are very good. And you may find 20 or 30 that are good enough to be quite useful.

THE INVESTMENT MANAGEMENT BUSINESS: DON'T PRACTICE PSYCHOLOGICAL DENIAL

Investment managers as a whole don't add any value....

Munger: Finally, I'd like to once again talk about investment management. That is a funny business — because on a net basis, the whole investment management business together gives no value added to all buyers combined. That's the way it has to work.

Of course, that isn't true of plumbing and it isn't true of medicine. If you're going to make your careers in the investment management business, you face a very peculiar situation. And most investment managers handle it with psychological denial — just like a chiropractor. That is the standard method of handling the limitations of the investment management process. But if you want to live the best sort of life, I would urge each of you *not* to use the psychological denial mode.

However, it's not impossible to add value.

Munger: I think a select few — a small percentage of the investment managers — *can* deliver value added. But I don't think brilliance alone is enough to do it. I think that you have to have a little of this discipline of calling your shots and loading up — if you want to maximize your chances of becoming one who provides above average real returns for clients over the long pull.

But I'm just talking about investment managers engaged in common stock picking. I am agnostic elsewhere. I think there may well be people who are so shrewd about currencies and this, that and the other thing that they can achieve good long-term records operating on a pretty big scale in that way. But that doesn't happen to be my milieu. I'm talking about stock picking in American stocks.

I think it's hard to provide a lot of value added to the investment management client, but it's *not* impossible.

—OID

[Editor's note: The preceding feature was lightly edited from the original published version.]

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Outstanding Investor Digest

THE FOLLOWING IS A SPECIAL REPRINT FOR BERKSHIRE SHAREHOLDERS
WITH THE COMPLIMENTS OF BERKSHIRE HATHAWAY

PERSPECTIVES AND ACTIVITIES OF THE NATION'S MOST SUCCESSFUL MONEY MANAGERS.

Investors featured in this Edition:

Other Investors in this Edition:

Companies & Investments in this Edition:

Volume XV Numbers 3 & 4 December 18, 2000

OID MAILBAG:
FPA CAPITAL FUND'S BOB RODRIGUEZ
"MANY VALUE STOCKS ARE BEING NEGLECTED —
AN OPPORTUNITY WE WISH TO SHARE WITH INVESTORS."

After closing FPA Capital Fund to new investors in 1995, Bob Rodriguez said two criteria would have to be met before he would reopen it: (1) There would have to be a plethora of investment opportunties. And (2) there would have be very little interest in value investing. In his latest letter to shareholders, he says both requirements have been met.

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OAKMARK FUNDS'
BILL NYGREN & HENRY BERGHOEF
"EVERYONE'S BECOME A MOMENTUM INVESTOR —
A TREMENDOUS OPPORTUNITY FOR VALUE INVESTORS"

Bill Nygren started managing Oakmark Select Fund in November of 1996. He told his partners at Harris Associates that his goal was to run a concentrated value portfolio and achieve an excellent track record over time. He told them that if the firm's past track record was any indication, somewhere in the first five years, there'd probably be an exceptional year: hopefully, there wouldn't be a horrible year; and the rest would probably be mediocre.

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BERKSHIRE HATHAWAY'S WARREN BUFFETT &
WESCO FINANCIAL'S CHARLIE MUNGER
"WE USE THE PHRASE 'WRETCHED EXCESS'
BECAUSE THERE ARE WRETCHED CONSEQUENCES."

As we've said before, introducing Berkshire Hathaway's Warren Buffett and Charlie Munger in the pages of *OID* is akin to introducing the Pope at the Vatican — unnecessary at best. But $10,000 invested in Buffett Partnership in 1956 and reinvested in the stock of Berkshire Hathaway at the partnership's termination in 1969 would today be worth more than $270 million — *after all taxes, fees and expenses.*

Incredibly, even those figures understate Buffett's feat

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THIRD AVENUE VALUE FUND'S
MARTY WHITMAN
"USG'S FINANCIAL STRENGTH IS CLEAR.
WE'RE FOCUSING ON ITS LIABILITIES."

If anyone is more qualified to assess a company in the midst of legal uncertainty than Marty Whitman, we don't know who it would be. Besides knocking the cover off the ball year after year at Third Avenue Value Fund and being a recognized expert in the field of bankruptcy, he's invested in distressed securities for more than 40 years and even taught graduate level courses on the subject for most of that time.

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WESCO FINANCIAL'S
CHARLIE MUNGER
(cont'd from page 1)

— because, believe it or not, before fees, but after all taxes, that $10,000 would have grown to more like *$500* million.

Of course, the manner in which they've achieved those returns is no less remarkable. (However, we won't utilize scarce space to re-tell you about it here.)...

The following excerpt was the Wesco Financial segment of this edition's 27-page feature on the annual meetings of Berkshire Hathaway and Wesco.

We're very pleased to bring you excerpts ... from Munger's answers to questions from shareholders at Wesco Financial's meeting. And as always, we highly recommend a careful reading (re-reading, etc.).

WE'VE VERY RARELY HAD TO REMOVE ANYONE. AND IT'S NOT BECAUSE WE'RE SOFT OR FOOLISH.

We're the least "people-removing place" I've ever seen.

Shareholder: One of your most important jobs is to judge people — and you guys have done a fabulous job over the years. But occasionally, you decide that somebody doesn't fit. And I know that every situation is idiosyncratic and specific to that set of facts. But have you learned anything over the years that helps you decide whether it's the wrong person as opposed to someone running into bad luck or making a single bad decision?

Charlie Munger: It's *amazing* how few times over the decades we've had to remove a person. Compared to any other company I know, we're the "least people-removing" place I've ever seen. And I don't think that's because we're soft or foolish. I think it's because we're either wiser or luckier in the people that come to power in the first place.

We all tend to be too slow in doing the obvious people-wise.

Munger: However, *anybody* who makes a lot of personnel decisions makes mistakes that have to be corrected. And if you ask 100 intelligent executives looking back on their careers what their worst mistakes were, a high percentage of them will say, "I was way too slow to make some personnel change after it became obvious."

I'd guess that if you were to ask Deloitte & Touche what the big mistakes were that they made, they would say, "I was way too slow to cashier some client or partner." The human condition is such that we all tend to be too slow in doing the obvious.

But we've tended to be right about people time after time.

Munger: But our record is *fabulous* on that. It may be partly because we're so old-fashioned. Whatever it is, it's been working very well.

When Cort Business Systems came into Wesco, Warren said, "You're going to love Paul." And he was right. Paul has been working at Cort since he was in law school and he's been running it for many years. He really understands it. And he *likes* it. And he's *good* at it. He wouldn't have fabulous numbers from what looks like a mundane business without very excellent management.

We're guessing when a person like Paul Arnold comes aboard that he'll be here long after we're gone. And so far, we've been right on that kind of thing time after time.

The guy who ran Precision Steel for us finally retired after 50-odd years with the business. And he's been succeeded by a veteran of a mere *40* years or thereabouts.

THERE ARE CERTAIN VIRTUES IN OUR SUBSIDIARIES, BUT WE DIDN'T CREATE THEM. THEY WERE THERE.

We didn't create our subsidiaries' virtues. They were there.

Alice Schroeder: I've spent a lot of time in the last year travelling around meeting the managers of the different Berkshire operations. And Berkshire's portrayed as not having a unified culture, a centralized management or anything that really characterizes it — that the different operations are run completely individualistically.

Yet one of the things that struck me — one of the first things I noticed — is that there is, in fact, an *extremely* unified culture. The different companies have things in common. If I had to boil it down, I'd say every one of these people knows their own circle of competence with great intensity, has *no* desire to venture beyond it and really understands the promise they're making to their customers and that keeping that promise is the single most important thing.

Are all these companies in that identical state when you buy them or is some of this instilled afterwards?

Munger: You're right. Certain common virtues *are* observed in the Berkshire subsidiaries. That's because we *love* those virtues and we tend to select companies that display those virtues. But we haven't created the virtues. They were there in the culture before we ever came along. What we do is not screw it up.

That's not to say their virtues haven't been reinforced....

Munger: I do think that when those managers come to the annual meeting or bump into one another at other times and mix socially with other managers running other businesses and they find people very much like themselves with very unusual success stories, there's reinforcement — to use the psychological term — of the existing strength of the Berkshire subsidiaries' individualistic cultures.

(continued on next page)

WESCO FINANCIAL'S
CHARLIE MUNGER
(cont'd from preceding page)

I hope there will be some spread of desirable practice, say, in furniture retailing where we've got different practices that work in different places. For instance, in Utah, they've been way better at building a wonderful credit business than, say, we have in Omaha. Yet in Omaha, we've been way better at doing certain things than they have in Utah. And there are some distinct differences. For example, in furniture retailing, some subsidiaries are way more promotional than others. Well, we'd hope that we'd each learn from one another.

But we don't *force* those changes on subsidiaries. That's where we're different from other people. And we don't try and have a bunch of culture vultures at headquarters that are haranguing the troops to be more like us. We get a common culture because we've *selected* for it....

WE HAVE WAY LESS RISK OF A RUINOUS SURPRISE THAN ALMOST ANY INSURANCE COMPANY AROUND.

Do we think about catastrophe risk? Only with each breath.

Shareholder: A bunch of theologians and I were having lunch before the meeting and we were considering the risk of the super-cat business on Berkshire Hathaway's balance sheet. Capitalization in relation to premiums seems extraordinarily low. But given an enormous catastrophe and all of the super-cat hitting their top lines, what is the real ratio of potential loss to capital? Have you ever done that on the back of the envelope?

Munger: Well, I'd say it's done every *time* at the top on the back of an envelope. No important policy is written without the concurrence of Ajit Jain and Warren. So you've got two minds that think in terms of maximum loss the way you breathe — namely, automatically.

We don't *write* contracts where there's no upper limit. We do write *little* contracts like on an individual auto [where] we don't pay much attention to limits. However, for big super-cat exposures, every policy has a limit of maximum exposure.

Now, sometimes there's an automatic reinstatement... — so that the worst thing that could really happen would be a big earthquake followed by a big earthquake. But to me, it's inconceivable that we would lose 6% or 7% of the net worth of the company after taxes on one event.

(continued in next column)

We have way less catastrophe risk than almost anyone.

Munger: We *like* writing [contracts] where we take risks on that scale. The big risks of super-catastrophe, by and large, aren't in super-cat policies. They're in [the companies that] write ordinary policies against storms or something who haven't laid off the risk in any way by effective reinsurance. If big enough storms came through developed-enough swaths of the country, some insurers could suffer losses way beyond their total capital.

Roughly, that happened to 20th Century right here in California. That earthquake basically took 100% of their capital. And it happened because they had a lot of little policies concentrated [geographically] — and an earthquake, of course, had concentrated effects.

No, I would say that we have *way* less chance of a ruinous surprise than almost any insurance company that you could name. On the other hand, we have a way *greater* chance than most people of having an occasional year where we take a whack like 6% of capital after taxes.

We're buying less reinsurance and selling more everywhere.

Shareholder: ...If I read the annual report right, Wesco lays off some of the risk that Kansas Banker's Surety takes on to others. Maybe it's to Berkshire. Why doesn't Wesco carry the whole thing?

Munger: Well, that's a very intelligent question. We do carry miles more of the risks at Kansas Banker's Surety than the company carried for itself without reinsurance before we bought it. But we haven't gone to zero reinsurance — we've gone to immensely *reduced* reinsurance. But you raise a very good question.

Shareholder: Will you carry the whole risk at some time?

Munger: That's certainly conceivable. We tend to do less reinsurance everywhere where we're the purchaser and more where we're the reinsurer.

We can handle lumpy results.

Shareholder: It seems that Wesco is getting bits and pieces of reinsurance. Do you worry about the lack of diversification and whether your results will be quite different from the parent company when you're not getting a pro-rata share of everything?

Munger: ...The nature of the reinsurance business of Wesco is odd bits and pieces, sometimes big chunks. And am I worried about the fact that that's unconventional and that it will cause lumpy results? No. I'm not worried about it causing lumpy results. We're rich enough that we can handle lumpy results.

After all, we've had lumpy results on the *good* side for a long, long time. And we're so rich that we can handle an occasional lumpy result on the *bad* side. And we think it'll work out OK over a long time.

And that's not a *defect*. It's an *advantage*.

Munger: That is one of our *advantages* as an insurer.

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WESCO FINANCIAL'S
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(cont'd from preceding page)

We don't give a damn about the results being lumpy — whereas everybody else is trying to please Wall Street by having smooth results. And that is not a small advantage.

So what your question may cause some people to view as a *defect*, I think of as the shining face of an advantage.

Low premiums to surplus = Greater investment flexibility.

Shareholder: I believe that Wesco writes at about 10% of its surplus. I just wondered if you could tell us how much Berkshire writes as a percentage of its surplus?

Munger: Both Wesco and Berkshire write amazingly low amounts of insurance in relation to surplus. And that practice gives us way more investment flexibility than companies that write a lot of volume in relation to surplus — and we *like* it that way. That's part of the reason.

The other part of it is that we just don't find enough opportunities to write insurance to use the capacity that we have. We would *cheerfully* write a lot more insurance than we do if we could conveniently find policies that were attractive to us....

Decline in GEICO's float growth not necessarily a negative.

Shareholder: The ratio of float to premium growth at GEICO has declined steadily since Berkshire acquired it — so that the growth in float hasn't matched the growth in premiums. Can you tell us whether you think that ratio will bottom out at some point and float will then grow at a faster rate or give us your thoughts about that?

Munger: Here, I can give you an answer in which I have total confidence. I didn't know that it was going down. And now that I do, I could only guess why it's happened.

Here in California, the ratio of float went down because we squeezed a lot more fraud out of the auto accident settlement business. It was fraud that increased that float. If every little fender-bender is turned into phony chiropractic testimony, phony economic testimony, etc., etc., etc., float goes up.

In California, they changed the laws to some extent and the defense practices were changed to some extent. As a result, an enormous amount of fraud was squeezed out of the auto liability business in California. And that reduced the ratio you're talking about.

However, whether or not that's been the case at GEICO, I'm ashamed to say I do not know....

ACCOUNTING FOR DERIVATIVES IS A *DISGRACE*, BUT GEN RE AND BERKSHIRE WILL DO IT RIGHT.

Accounting for derivatives is a *disgrace*....

Shareholder: Can you talk a little bit about Berkshire's substantially increased use of leverage through its General Re derivatives operation? I think it's increased about 50% from the time it was purchased. Is that a proper use of capital — to invest over $2 billion [in derivatives]? And isn't the downside risk much greater than the upside potential?

Munger: I have not followed in detail the nature of the General Re derivatives business. I *did* follow a very, very similar business at Salomon very closely over many years when I was a director and on the audit committee.

And I hate with a *passion* Generally Accepted Accounting Principles as applied to derivatives — in particular, interest rate swaps. The accountants sold out. J.P. Morgan was the last holdout among the reputable banks. But it sold out to a type of accounting that front-ends into income revenues that should not be recognized as income until very much later. So that is my opinion. I regard it as a *disgrace*.

And it's very stupid to have disgraceful accounting and then reward all the people doing the trading based on profits which are displayed in that disgraceful accounting. So I have that general feeling on derivatives.

But General Re does it better than most, if not all....

Munger: I am sure that General Re has a more conservative operation and better accounting than most, if not all, of the other players in the field. It's a naturally risk-averse place. It may have had some misfortune — even a mistake — lately. But basically, it's a very intelligent place with a very good culture. And its business instincts are right.

I don't like the basic business of being a derivatives dealer.

Munger: However, I do not like derivatives trading in interest rate swaps as the world has developed. It's a field with shoddy accounting and other irresponsible aspects.

Bob Denham is here. He was CEO of Salomon and sat sadly scratching his head through some of those hard days. I don't think I'll put Bob on the spot on that one with so many old colleagues and what have you. But I'm so old, I'm willing to just call 'em the way I see 'em.... The basic business of being a derivatives dealer with the kind of accounting that we now have, I don't like.

But it's quite possible, even necessary, to use derivatives.

Munger: Still, I never wanted its total elimination from Salomon — because I thought we *had* to be in it. And it may well be that at some level a little of it has to exist in General Re or even at Berkshire. And I never minded the derivatives trades that were done by the Meriwether group at Salomon. What I minded was the derivatives business conducted on a market-making business by *other* groups within Salomon.

I think it's quite possible to *use* the derivatives market. Indeed, Berkshire's quite capable of doing that in the future. But basically, I think there's a lot that's irresponsible in the derivatives business. And General Re has already

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(cont'd from preceding page)

announced that they plan to, one way or another, do *less* of it....

THERE'S PRACTICALLY NOTHING IN ACCOUNTING TO KEEP THE SKILLED FROM SHUCKING THE SUCKER.

Accounting abuse is regrettable now and will be *more* so....

Shareholder: My question is about accounting ... specifically the recent proliferation of accounting fraud as well as abuse of accepted GAAP accounting and the implications for an outside passive minority investor in public securities evaluating businesses even when one finds a superior business at an attractive price. Could you please comment on that as it relates to its implications for the markets and how one might go about correcting it?

Munger: Where so much money turns on numbers that happen to be reported, the human temptation to manipulate the numbers is bound to be pretty substantial. And then, when everybody's doing it, you get what I call "Serpico Effects" — you know, everybody else is doing it and you're a sucker if you don't go along and so on and so on. So I do think we get tons of promotional accounting, *particularly* in a period like this — which is regrettable now and will look even *more* regrettable when we look back on it a few years hence.

Defrauding suckers is hardly a new activity for the species.

Munger: I think it's *always* been thus. You can see what human nature will do unobstructed if you go back to the days of the early Irish ruffians who ran the Comstock Lode. Those guys were not satisfied with having the heart of the Comstock Lode where they could mine silver more efficiently than it had ever been mined before in the history of the world. After all, you can only make so much money digging out all the silver and turning it into currency.

So they decided since they controlled the companies, they would turn a *one*-handled pump for making money into a *two*-handled pump. Mining companies in those days declared monthly dividends. So they'd run the dividends way up, put out a lot of wonderful rumors — and then they'd sell short heavily. Then they'd fill the mine with water, cut the dividends to zero and buy the shares back. And you could do that over and over again. They turned a mine into something that would make money in two ways — mining silver and defrauding suckers.

It's not so *crude* today, but it's still being done in *spades*.

Munger: If it were *legal*, it would be done enormously to this very day. People get pretty close to it in some ways by crowding in to take advantage of unsound accounting conventions. The standard way of doing it today is not so crude as the one devised by Fair, Flood, Mackay & O'Brien — the gentlemen who figured out the two-handled pump system for handling the Comstock Lode.

Today, it's chain letter mechanics that people use to shuck the suckers. And since they're mixing the mechanics of a chain letter with legitimate activities like venture capital, improving commerce and what have you, it gets respectable. That's what caused great hostility from my wife when I said, "When you mix turds with raisins, they're still turds." I think we're mixing those respectable activities with *un*-respectable activities.

And that's being done in *spades* in the current era. There's practically *nothing* in accounting that is carefully designed to limit what some sophisticated entrepreneur can do with chain letter principles skillfully worked into a legitimate enterprise.

AND DARWIN DOESN'T JUST APPLY TO BIOLOGY. EVOLUTION IS AT WORK IN BUSINESS, TOO.

The New New Thing describes an appalling culture.

Shareholder: Have you read *The New New Thing* by Michael Lewis? If you have, may I ask your opinion of it?

Munger: Yes, I did. And I found it interesting enough so I didn't put it down until I'd finished. In some respects, it describes an appalling culture. It's had some creativity and made some large contribution to the wider civilization. But some of what's developed in that culture is not pretty.

In England, in the days of the asset-strippers — remember Slater? — one of the prime ministers called him "the unacceptable face of capitalism". And I would say that there were things described in *The New New Thing* that come pretty close to the unacceptable face of capitalism....

It's hard to isolate the five most valuable books I've read.

Shareholder: This year, [at Berkshire Hathaway's annual meeting,] you did not recommend any books. Could you name three to five important books you've read in your life that you might suggest to people who are interested in your field?

Munger: Well, I have trouble doing that because I've *blended* so many books in my own mind. If you have a very interdisciplinary mindset — which I've had for decades — you're just going through books like a scavenger slotting things out of the book into your own internal system. Therefore, you can't point to one book and say, "There is the source of all Truth" the way that the people at the Fuller Theological Seminary do right across the street.

But *The Selfish Gene* is one fabulous book.

Munger: I have had *enormous* pleasure at picking up this modern Darwinian synthesis — you know, Dawkins' *The Selfish Gene*. If you've never been introduced to that book and the way of thinking that's contained in that book — if you have any intellectual curiosity about the human condition — that is one fabulous book. The truth of the

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CHARLIE MUNGER
(cont'd from preceding page)

matter is without that insight, the basic Dawkins insight, you don't properly understand one of the most important theories ever found.

And by the way, he didn't *invent* the insight. He just popularized it better than anyone else has ever popularized a difficult insight.

But I would say that that is one fabulous book. So if any of you haven't ever read Dawkins' *The Selfish Gene*... That is one wonderful book.

Everything isn't invented. Sometimes it just evolves....

Shareholder: Are there lessons from the field of evolution that we can apply to evaluating businesses and industries? In other words, are there parallels in biology and business in terms of the functions and structures and the performance and the development of things?

Munger: Well, the answer to that is, "*Yes.*" All *kinds* of things that work in business have been discovered by what I call "*practice* evolution". And just as evolution has gradually developed the eyes and wings and claws and behavior patterns that work so well to feed the animal, human enterprises have developed behavior patterns winnowed by their successes and failures.

So a lot of what you see that works like crazy, nobody thought it through *ab initio* the way that you would derive some theorem of geometry from axioms. They just blundered through a lot of things, repeated what worked and avoided what didn't. And in time, the result was a very elaborate practice evolution.

Darwin in business — the origin of ~~species~~ businesses.

Munger: Take something like Cort which has been in business for such a very long period. It has a lot of practice evolution in its personnel system and its practices of a million different things. When you evaluate businesses as a common stock investor, you're betting to some extent on the outcomes of practice evolution. And some people have developed better systems.

Take a mundane business like the car rental business — the equivalent of what Cort is doing with furniture — the short-term rental of automobiles: Both Hertz and Enterprise have through practice evolution created personnel systems, leasing systems, location systems and reward systems that work very well for them and that are different. It's very much like biology. In other words, Enterprise Rent-A-Car and Hertz are like two different species in ecological niches that are close together. Through practice evolution, they're just like two different butterflies. And each system *works*.

So yes, I think a lot of money can be made by common stock investors by identifying the outcome of practice evolution which really works.

There wouldn't be Tupperware parties if they didn't *work*....

Munger: One of the most extreme examples in modern capitalistic history was Tupperware. It developed what I regard as a corrupt system of psychological manipulation in order to sell a better class of plastic dishes. Well, when Justin Dart brought that to his board of directors for purchase, a couple of directors *resigned*. They thought it was so schlock, they didn't want to be identified with it.

But Justin Dart figured, "Well, nobody would have invented all that crazy shouting of Tupperware and bugging one friend to entertain other friends etc., etc. unless the practice evolution *worked*."

And Tupperware had enormous — what they call in show business — "legs". *Billions* of dollars were made out of Tupperware parties. And it went on for *decades*, although I think it's groaning in the traces now — as it probably should.

But my point is that somebody who *never* would have invented that system, like Justin Dart, saw it was working. And even though it came out of practice evolution, he predicted that it would *keep* working and the fact that it looked so *schlock* would keep a lot of other people *out* of it. At any rate, his decision made him a lot of money.

A *lot* of money can be made by thinking biologically.

Munger: So I do think biological reasoning actually can help you in investing because I think you will frequently find the outcomes of practice evolution in companies that will point to money-making opportunities that you can't recognize by deriving them from fundamental principles or something like that. Therefore, you've got to think *biologically* — as I think Justin Dart did with respect to Tupperware. I think a *lot* of money can be made that way.

We wouldn't have bought Cort Systems if we didn't like the culture that has evolved there — which, again, is practice evolution.

In most messy human problems, you need *all* the models.

Shareholder: You've talked about carrying a lot of models to improve your life. With your life experience and your knowledge about notions and models, do you have some special kind of general framework for reasoning when you apply those notions and models so that there are some generic questions you ask yourself when you approach different types of issues?

Munger: Well, that's a good question. My notion is so simple that I wonder that everybody doesn't immediately adopt it. I think you have to know the big ideas in all the big disciplines. Then, in most messy human problems, you have to be able to use *all* the big ideas and not just a few of them.

What happens is that people are trained in economics or engineering or marketing or investment management or something else. So they learn a few models and then they run around trying to solve all their problems with a limited number of models. And they don't really understand how their models intermix with other people's models.

So my system, such as it is, is just to learn all of the

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(cont'd from preceding page)

big models and use them *routinely* instead of just the models in which you happen to have the training. I've always loved that old saying, "To a man with a hammer, every problem will tend to look pretty much like a nail." That is a very dumb way of handling problems.

The core of EVA makes sense, but it wouldn't sell that way.

Shareholder: In Stewart's book, *The Quest for Value*, where he talks about Economic Value Added, he references Mr. Buffett in terms of the creation of shareholder value. I just wondered to what extent you and Mr. Buffett embrace the EVA principle and if you use that in your analysis?

Munger: Well, EVA, of course, is very popular because at least it talks about how you get a high return on capital and points out that shareholders are enormously benefited if you manage to get a high return on capital and if you can reinvest at that high return for a very long time.

But if you stated it the way that I've just stated it, you couldn't sell any books.

I don't think it's an admirable human system.

Munger: So you have to dress up the elementary idea with a lot of twaddle, copyright the twaddle and sell it to various people at high prices per hour — making it *worse* by introducing fuzzy concepts that don't really *work*, like a cost of capital concept that makes no true economic sense.

I don't want to talk any more about it. You can see that I... I think it's succeeding because there's some underlying truth that it is consonant with. But I don't think that it's an admirable human system. In its totality — what should I say? — it's like psychoanalysis.

WHAT WE'RE DOING SHOULD SPREAD — BUT WHAT'S SPREADING IS SOMETHING ELSE.

Why aren't we copied more? Partly because we're different.

Shareholder: I'd like to pick up on your thread with regard to economics and psychology. Why do you find that no one else seems to be trying to emulate Berkshire today? You have fund managers who run funds and people who run companies, but Berkshire seems to be rather unique. Why isn't anybody else trying this formula?

Munger: Well, I think that's a very good question — and, of course, we've asked that of ourselves. Look at how it's worked for us and the obvious fun we're both having doing it. Look at the fun our managers are having running their businesses. And look at the fun, by and large, that the shareholders are having which you can see at the annual meetings — even at crazy gatherings like this one. Why don't more people copy it? I think more *should*.

I don't think what we're doing is that difficult. I think it *looks* difficult from the outside — partly because it's unconventional. I think the unconventionality of it makes it get rejected. It isn't the way things are normally done. We don't have all these budgets, goals, quarterly reviews and all *kinds* of things in terms of dealing with subsidiaries that are standard in American management. We don't have personnel systems that are standard. And our investments are way more concentrated than is conventional in portfolio management.

Everything we do just strikes me as simplicity itself and to make nothing but sense. Yet it is very little copied.

People do copy us some — sort of....

Munger: It *does* get copied some. People invent something — or at least they invent a new *name* for it. They call it "Focus Investing." And they say, "We're going to be like Berkshire. We're going to have 10 securities instead of 40" — or 10 instead of 400 or whatever. I think there is more of that. I think so-called "Focus Investing" is growing somewhat, but only slightly.

What's *really* growing is exactly what I criticized in my speech to the Foundation Financial Officers [Group] — just unlimited consultants on allocation strategies and consultants on the monitoring of other consultants. *That's* what's growing. It's being *taught* in the business schools.

I was with Jack McDonald the other day at Berkshire's annual meeting. He teaches sort of a Berkshire mindset in terms of portfolio management at Stanford Business School. And I'll tell you what *he* feels. He feels lonely like the Maytag repairman. And I'm afraid that that's just the way it is.

We know why our compensation system isn't copied.

Munger: The world's *always* had crazy conventions. I was in Army ROTC for six years in high school and college. And that was a limited culture with certain standard constructs. It did not have a lot of new ideas. And I think there's a lot of that kind of ROTC thinking at very high falutin' places where people have Ph.D.'s and other advanced degrees. That's just the human condition.

But I don't know *why* our example isn't copied more. You'd think having overhead as low as we have it would attract people. Of course, part of how we *keep* it so low is not assaulting corporate compensation systems *ourselves*. And Berkshire's system for paying its top executives is a nonstarter at most places.

I'm not answering questions at this meeting for the money.

Shareholder: Which question should I ask of you today to highlight any specific area that might be fascinating to you?

Munger: I'm more fascinated with effective rationality as a lifelong quest than I am with any detailed activity like golf, accounting, bridge or what have you. And I'm quite confident my mindset will spread because it *works* better. In other words, a more basic, multidisciplinary approach to messy human problem-solving will spread. It *is* spreading.

And to the extent that I can contribute a tiny mite to

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that by answering questions here for a long time, that's why I'm doing it. It isn't that I like being a paid entertainer — or, even worse, an *unpaid* entertainer.

There are lessons in this little meeting for a reason....

Munger: I do think these ideas that come out in response to your questions either *are* or *should* be of utility generally — and in activities far removed from investing in common stocks. I'm talking about *lifes*manship.

I think Berkshire is about lifesmanship. I think the lives of the people that run the Furniture Mart or the two subsidiaries we have here in Wesco are good lives. I think the people around headquarters at Wesco have had pretty good lives even though they have had a basic business shot out from under them. And I'm talking about the savings and loan business.

So to the extent there are lessons in this little meeting, all I can say is, it's *intentional.*

IS COCA-COLA EXPENSIVE? SURE.
BUT THEN AGAIN, IT *SHOULD* BE.

If I'm right, if you own Coke long enough, you'll do all right.

Shareholder: What long-term growth rate in both unit case volume and EPS growth do you think that Coke will be able to achieve? Recently, *Beverage Digest*, a respected trade magazine, polled a number of bottlers who believe Coke cannot achieve its current unit case growth goals of 5-6% in the U.S. and 7-8% in the rest of the world without a price war.

And in my humble assessment, the bottlers have a little more credibility than Coke's management team at the moment in terms of their assessment of the business. So could you help me with that?...

Munger: Well, I don't think my view as to the exact probable percentages for future growth at Coke should get any special weight. I would be willing to bet a lot of money — in fact, you can say that indirectly I *am* betting a lot of money — that over the next 20 or 30 years, Coke will be selling materially more soft drink and other drink products. And I think they'll also be able to raise prices moderately during the same period and, if anything, increase margins.

Now if I'm right in that long-term view, if you own Coke and hold it long enough, you'll do all right. However, I don't think I want to get into arguing with the experts about the correct target for Coke.

Some believe in setting unreasonably high goals....

Munger: There are two lines of thought.... A whole bunch of management gurus say you need B-HAGs — bold, hairy, audacious goals. That's a technique of management — to give the troops a goal that looks unattainable and flog them heavily. And according to that line of thought, you will do better chasing a B-HAG than you will a reasonable objective.

And there's some *logic* in that — because if you tell your kid A-minuses are fine and he likes partying around the beer keg and can easily get A-minuses, you may *well* get a lower result than you would if you gave him a different goal.

[Editor's note: That reminds us of John Templeton's experience as a youth. After young Templeton brought home straight A's on one of his first report cards, his father, Harvey Templeton, decided that he would reinforce his son's drive for excellence by wagering him a bale of cotton that he could not achieve straight A's on his subsequent report cards. The result? Templeton earned straight A's in each and every grading period during elementary school, junior high school and high school (and 22 bales of cotton).]

Unfortunately, unreasonably high goals cause cheating....

Munger: Then there's another group that says that if you make the goals unreasonable enough, human nature being what it is, people will cheat. And you see that in the public schools — where they say you've got to have the reading scores better so we're going to pay the teachers based on the reading scores getting better. So the teachers start helping students cheat to pass the reading tests. So human nature being what it is, if the goals are unreasonable enough, you will cause some cheating in your corporation — or even within your top management.

Each organization has to find its own way.

Munger: I can't *solve* that problem. There are two factors that are at war. You don't want the cheating — which is bad long term and bad for the people who are doing the cheating. However, you *do* want to maximize the real performance. And the two techniques are at *war.*

What people generally do is give people the unreasonable goal and tell 'em, "You can't cheat." That's basically the goal at General Electric. They say, "We don't want any excuses.... But don't cheat.... If you can't handle those two messages, why, perhaps you'd be happier flourishing somewhere else." That is the American system in many places.

I've got no answer to that tension. Low goals do cause lower performance and high goals increase the percentage of cheating. Each organization has to find its own way.

Is Coke expensive? Yes. But it *should* be....

Shareholder: I understand your point — that stretch goals have certainly worked out great at General Electric.

If you could then help me think about my intrinsic value calculation. When I play around with the numbers and I take the highest earnings that Coke's had over the last several years and try to grow that out at fairly aggressive numbers — perhaps 9% for 10 years, 7% for 10 years after that, etc., permanently settling out at 3% or 4%

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— and then use an 8% discount rate, I still have a hard time seeing how the stock is anything but slightly overpriced. What might I be missing?

Munger: Well, you're pointing out a basic element of human securities valuation: If growth is *sure* enough, at practically any slight advantage over standard returns — say, interest rates — and if you project it far enough, the present values get very *high*. So when you get stocks like Coke where a lot of people have a lot of confidence that if they're coloring and flavoring 2% of the world's water now and it'll be 4% 20 years from now or something like that and they'll be charging higher prices, then people start giving it these higher valuations based on what you might consider a moderate advantage projected a long time.

But moderate advantages projected ahead a long time cause very high real values now. That's just the way the math works out. So what you're seeing in Coke is a residual prediction in spite of the stumbles of recent years that the underlying strength is still there — and that if you blank out these blips up and down, 20 years from now they'll be coloring and flavoring a lot more water and earning more per serving, which is the way that I tend to think personally.

SOMETIMES I'M IN THE DARK INVESTMENT-WISE,
BUT I KNOW WHAT WE'RE DOING WITH NET-JETS.

We don't even *look* at what Lou Simpson's doing.

Shareholder: You guys took two positions — one in Great Lakes Chemical and the other in the furniture area. Could you comment on both industries?

Munger: Well, I don't want to comment on the chemical industry. And by the way, when you say "you"... Frequently Lou Simpson will do something. And I don't even *look* at what he's buying or selling. So people will sometimes come up to me and say, "Why did you do that?" And if Lou isn't there, I haven't got the faintest idea why "we" did it.

Cort is an anomaly. But it's been an anomaly for *decades*.

Munger: As to the furniture industry, it's interesting. You can call that an accident. Berkshire now owns the leading furniture retailer in something like six different states. And the companies have somewhat different operating personalities. Now if you add Cort, which is in the so-called "rent-to-rent" end of the furniture business, we're a pretty substantial operator in furniture distribution — I mean, *really* substantial in that trade.

And that happened by accident. Furniture retailing is not generally a good business. But if you get into the very *best* of it — in terms of market share, practices, institutional personality — it's a very fine business for us.

And Cort has had *very* respectable operating numbers for *decades*. It seems like renting furniture couldn't produce such numbers — but it has and does. And that's why we own it.

NetJets is experiencing explosive growth in the U.S.

Shareholder: We came here on NetJets. The pilots told us that you have 700 pilots now and expect to have 1,000 pilots by the end of the year. That strikes me as rather explosive growth. Could you go into that a little bit?

Munger: I *did* go into it. I bought a sixteenth of the cheapest jet. [Munger laughs.]

Europe will be a perfect bitch of a place for us with NetJets.

Shareholder: They also said that they thought the inability to find good pilots in Europe seemed to be a constraining factor there....

Munger: Yeah. Europe will be a perfect *bitch* of a place in which to get up to speed — going into a lot of different countries with a lot of different rules and with the labor and other climates in Europe. We will lose money — we *are* losing money — going into Europe.

But short-term pain will lead to long-term gain.

Munger: But the nature of it is that if you get in there first and do it right and you've been *through* all the indignities, the latecomer is going to have *all* the indignities and trouble plus he'll have NetJets there. And if you think *we're* having troubles, boy is *he* going to have troubles.

So that's what encourages people to suffer like that. And Coca-Cola's done that all over the world — they've suffered like *hell* to go into difficult places. And look how well it worked in the end. That's what NetJets is doing in Europe. We're suffering for the long-term future....

IF HISTORY IS A GUIDE, EXPECT THE UNEXPECTED.
WE TRY TO BE PREPARED FOR THE EXTREMES.

We haven't made big profits with our interest rate insights.

Shareholder: Warren's said that if Alan Greenspan were to whisper in his ear exactly what he was going to do with interest rates, it wouldn't change a thing he does. But do *you* have an opinion about Fed policy? Do you care? Has the higher interest rate environment affected any of your companies?

Munger: Neither Warren nor I has any record of making large profits by guessing what the Federal Reserve is going to do or in which direction interest rates are going.

But if history is any guide, expect the unexpected....

Munger: That said, all intelligent citizens of a modern republic think some about interest rates. In my lifetime, I've seen interest rates at 1% and I've seen them at 20%.

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Now that's one hell of a range. As you sit here, 1% seems *inconceivable*. However, in Japan, short-term interest rates are *under* 1%.

When I was in law school, I think interest rates were about 1-1/2% for a long, long time. Common stocks yielded 6% or 7% and the Dow was a few hundred points. And those low interest rates lasted a long, long time.

And *nobody* really thought we'd ever get a prime rate of 20-21% and government bonds yielding 15-16%. But we *had* those conditions and they lasted a long time.

We try to be prepared for the extremes.

Munger: We try and operate so that it wouldn't be too awful for us if something really extreme happened — like interest rates at 1% or interest rates at 20%. But when they're in some intermediate-type range, we tend to be agnostic about interest rates. We tend to operate as if we just can't guess which direction they're going — and even what the long-term trends are going to be.

Prolonged Japanese downturn contradicts Keynes....

Munger: *Anyone* with any intellectual curiosity has to be flabbergasted by Japan being in this heavy recession for 10 years in spite of taking interest rates down near zero and running a huge government deficit. In other words, they're playing all of the monetary tricks and all of the Keynesian tricks — and yet they still have a recession that has now been about as long as our recession in the '30s, although it's not as severe, of course.

If you'd taken economics at Harvard during the postwar years, you would have been taught basically that that was impossible — that with these modern macroeconomic tricks that wise governments have learned how to play led by Keynes and others, what happened in Japan *can't* happen. But it *has* happened.

Economics by itself isn't enough....

Munger: So I think that interest rates get interesting — what they can do and what they can't do. For example, why does a crazy asset bubble in Hong Kong with a

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collapse that's met with massive government intervention in the stock market result in a pretty temporary downblip in the economic performance of Hong Kong whereas an asset bubble collapse in Japan results in a 10-year recession?

I don't think economics by itself, as traditionally done, will give you the right answer.

Factoring in psychology, Japan is very understandable.

Munger: I think that you've got to mix economics with other disciplines. And when you mix economics with psychology, you can begin to understand the difference.

The truth of the matter is that people in Japan went *catatonic* risk-averse. You could ease up money all you wanted. But the banks who'd lost so heavily and were being criticized so much in a nation where people hate criticism and loss of face, just didn't want to make loans — period — that might cause them more trouble.

Warren always cites the case of Mark Twain's cat that, after a bad experience on a hot stove, never again sat on a hot stove — or a cold stove either. That's what's happened in Japanese banking. They just don't want to make loans because it hurt 'em so much *last* time. And the Japanese consumer is behaving the same way.

Psychology explains the Hong Kong experience, too.

Munger: In Hong Kong, you have a bunch of Chinese. That is a different ethnic group. The love of gambling and the love of action among the Chinese compared to the Japanese — that's just two entirely different conditions.

Taking into account things like that is not in the economics books. But that's because the economics books are wrong. Economics will make better predictions when it learns to take in more and more from the other disciplines.

By the way, it's been pretty good at that over the years. Of all the crazy, self-centered social science disciplines, economics has been the best at being a kleptomaniac — just running out and stealing anything that works from some nearby discipline. And that's very much to the credit of economics, but they haven't carried it far enough. And when they do, they'll be able to make better explanations — or so it seems to this assistant headmaster of a cult.

Interest rates are important, but they're also unknowable.

Munger: At any rate, interest rates are a *very* interesting subject. And for you people that are thinking about what common stocks are going to do for yourselves and your clients, interest rates matter *terribly*.

If interest rates go to 3% and stay there, you could say our better stocks are too *cheap*. But if, like us, you figure you can't really predict interest rates, then you've got to be making investment decisions in some other way. Similarly, of course, if interest rates are going to go to 9% or 10% and stay there, that's a very different world for common stocks.

But I think that *predicting* interest rates is very tough. I'm not saying somebody might not be able to predict some short-term blips here or there by being either exceptionally shrewd or well-connected. But if you ask people to predict

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what interest rates are going to be a year or two in advance — or five years in advance — I think their predictive power gets down pretty close to zero.

I think you can predict a *range*. I think it's quite unlikely that they'll go below 1% or above 20%. However, once you get outside of a big range like that, I think it gets a lot tougher.... That may be more about interest rates than you want to hear.

With the proper tools, Japan is no great puzzle.

Munger: And I'm not kidding when I say that the economics profession has been horribly surprised by what's happened in Japan — the fact that their recession has just gone on and on and on.

I'm not surprised. And that's just because I'm using a *slightly* different model. Can you imagine standing up at an economics convention and saying that that happens in part because the Chinese are so different from the Japanese? My *God*, it wouldn't even be politically correct.

I WORRY ABOUT PROSPERITY BASED ON CREDIT. THERE *MUST* BE A MORE SOUND WAY OF DOING IT.

Recent economic nirvana was aided by credit expansion.

Shareholder: Do you believe the Fed *needs* to slow things down? Also, do you see inflation?

Munger: It's hard to imagine a mature, unionized, civil-service-pervaded economy like that of the United States performing much better than it has over the last few years. It has to be something pretty close to optimal given the natural constraints of the system.

And that, of course, has involved a fair amount of credit expansion. We've pushed credit card lending and we've pushed asset lending. Everybody leases automobiles instead of buying them. I don't think that's necessarily true in this room, but it's generally true in the civilization.

And it's hard for me to imagine it getting much *better*. I can conceive of various ways in which it could get *worse*.

I think Greenspan's right to be worried.

Munger: So you'd have to say based on the record to date, Greenspan and his crew have a remarkable record. And I think he's right to be worried about asset bubbles.

In fact, the relation of national policy to asset bubbles is a very interesting subject. You had a huge asset bubble in Kuwait that amounted to a vast chain letter scheme of speculation with some crazy ... check-kiting scheme. Basically, the government came in and bailed 'em out. Otherwise, the whole *country* would have been broke. It was a mass mania. However, they have a lot of oil — and they were able to kind of bail people out.

Then you got the Hong Kong bubble where you had massive intervention in the stock market directly by the government of Hong Kong. And the enterprising Chinese, who don't go into a catatonic state of fear with the first reverse — or the second or third — quickly bounced back.

Where else did we have an asset bubble? Well, Warren cited the farmland bubble, where people basically bid the price of farmland up to three times what could be justified by the natural income from owning a farm. And that bubble broke many banks and caused a lot of trouble. But it went away and it didn't sink the economy.

There *has* to be a more sound way of doing it.

Munger: I worry a little about prosperity that comes from constant pushing of the envelope of credit expansion. Some of the world's great growth periods — such as Germany after World War II — occurred without any assistance from that kind of massive credit expansion. There *has* to be a more sound way of doing it than what we're doing now.

The credit system's been pushed about as far as it can go.

Munger: You'd think that eventually we'd get to a place where we pay a price for constantly getting next year's expansion by pushing the credit system a little further. For example, how much farther can you push credit in automobiles when you're already leasing them guaranteeing a residual value with no down-payment? And of course, some of the venture capital financing is getting very gamey. So we've pushed [the credit system] pretty hard in a lot of places already.

I think all intelligent people that have been here for a long time tend to worry a little about asset bubbles and credit expansions. And Greenspan's plainly correct to be making clucking noises and warnings on those subjects.

HIGH HOUSING PRICES DO CAUSE PROBLEMS. BUT I DON'T THINK WAITING IS THE SOLUTION.

If you think there was a rally in technology *stocks*....

Shareholder: Silicon Valley's housing prices are exorbitant and interest rates are not doing anything to help lower the prices because people are buying based on stock options.

I'm wondering what your opinion is on salaries in general in Silicon Valley — inclusive of stock options — and how wage-earners might migrate away from the Valley and create a generalized recession in that area?

Munger: Well, I think you're right to call attention to Silicon Valley housing prices. There has been nothing that extreme in my long life — not even Florida prices in the '20s. The Munger Professor of Business at Stanford Law School bought a moderate kind of a house when he started teaching at Stanford for $400,000. Well, that house is worth $4-1/2 *million* now. And it's not that big a house. So there's never been anything quite like it in the previous history of the world.

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And booms in housing prices cause all kinds of problems.

Munger: And it does cause problems when housing prices get so high. If you're going to have a servant class, they're going to have to migrate in from a long way off — which causes all kinds of envy effects. The accident of who bought a house five years ago and who didn't causes an enormous change in life outcomes. It causes all kinds of envy. It's *disruptive* to have a boom in housing prices on the scale that you're right in the middle of. It's a *very* extreme condition.

But if you wait for the old prices, you'll be living elsewhere.

Munger: But whether it will get *more* extreme or have a big bust is an interesting question. I'd bet a lot of money that it will not be a total long-term bust. I don't think Silicon Valley is going back to the desert. In other words, Palo Alto's a wonderful place to live, educate your children, be surrounded by a lot of brilliant people and enjoy a wonderful climate.

So if you wait for the real old time prices and you want to live in Palo Alto, I think you're going to spend your life somewhere else.

IF THE INTERNET IS THE PROBLEM,
THERE MAY BE NO SOLUTION....

Internet will change things significantly. Even at See's....

Shareholder: At Berkshire's last two annual meetings, Warren opined that brands are going to become even more important over the internet. Would See's ever consider paying slotting fees to AOL or Yahoo so that when someone searches for "chocolate" or "candy", the first company that it pulls up is See's Candy?

Munger: We don't have any absolute rules about which kinds of sales promotion techniques we use at See's. See's is already selling through the internet the equivalent of about three or four stores' annual sales. And it's some of the best business we have — because we get the same price with a fairly low-cost system of distribution.

I wouldn't regard See's as *the* most ideal candy to sell over the internet because there's a problem of maintaining quality when you send it out into the August heat no matter what delivery system you use. Nonetheless, See's is changing its delivery system somewhat based on the existence of the internet.

Everywhere in Berkshire, we encourage people to adapt to the new reality — which is that the internet is going to be a big thing and it's going to significantly change the way things are done from how they were done before.

But what's good for consumers *won't* be good for investors.

Munger: But from *your* point of view — you investors — there's a *very* interesting aspect of the internet that gets little attention from the people promoting stocks in the new order of things. And that is that high profits on capital in corporations with passive shareholders are made possible in many cases by information inefficiencies.

Take the Berkshire subsidiary, Precision Steel, that sells steel in minor quantities cut to order — sometimes fabricated a bit to order. The information disadvantage many of our customers are at makes us the best solution. "I need a small, specialized quantity of steel — and I need it fast. So I'll call Precision. They're always reliable. They'll deliver it."

But if you create an internet system where every damn piece of steel in America similar to what they need can be punched up on a computer and there's an easy way to punch in whoever has the piece of steel, maybe that will make it better for the buyers and worse for the sellers. Maybe the seller's economic advantage, which is real, will be reduced.

The wealth of the world goes way *up* when we squeeze inefficiencies out of distribution and inefficiencies out of market effects. But in that squeezing, there may be an averaged-out, general compression *downward* of returns on capital in corporate America — just as better textile machinery didn't really help the textile companies. The profits from better textile machinery came to you people when you put on your pajamas and when you wipe yourself after a shower. On the other hand, they didn't come to the textile companies at *all*.

If the internet is the problem, there is no solution....

Munger: All kinds of technical interventions that are wonderful for the civilization are not necessarily wonderful for the passive owners of the common stocks. A really efficient system that gets closer to an auction and makes it very easy for anybody wanting anything to know all the people who have it available for sale may well compress profit margins, on *average*, throughout America — and, indeed, throughout the *world*.

So everybody talks about the internet as if it has to be wonderful.... But on average, it may be very bad for you people to the extent that you want to live passively on common stocks — and bad for me, too.

I consider it quite *likely* that margins will be compressed by this greater bandwidth. Why *wouldn't* they be? If so, then there's no great general antidote for it. It's just one more limitation in life — much like getting old. You can *adapt* to it, but you can't *fix* it....

A FALLING TIDE DROPS MOST BOATS.
WE CAN SHOW YOU THE SCARS....

We've seen high margin businesses become commodities....

Munger: When IBM was forced to give up its tab card monopoly, Warren invested in one of the little companies

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that was created to use the IBM tab card machinery and so forth and sell tab cards in competition with IBM. And they sold big clumps of tab cards — *everything* was tab cards — to the telephone company, department stores, etc.

But the tab card orders were so big that they were put out to competitive bidding after there were several sellers of IBM tab cards. And the prices got horribly *lower*. After all, a tab card is a *commodity*. One tab card properly made is very much like another. And when IBM had a monopoly on the damn things, they made 25% or more of the profit of the whole company out of the tab cards alone.

By the way, they had no patent on the tab card or its structure. They had a patent on the press that made the tab card that enabled their presses to go faster than other presses. That was a monopolistic situation that arose out of practice evolution and accident and God knows what. But it was no impregnable patent or intellectual property position that gave IBM its enormous advantage.

It's just that the tab card cost so little in reference to the cost of the total computing operation that people didn't like compromising with the possible quality of the tab card. Whatever it was, once there were a bunch of companies out there using IBM's presses and there was competitive bidding, the price of tab cards went way the hell down — especially on the big orders to the government and so forth that involved competitive bidding.

There will be some big winners. But *average returns*....

Munger: Why isn't that going to happen in product after product after product? It's only fair to turn [your question] around. Does anybody have an explanation of why that's *not* going to happen with the increased efficiency of the internet? So that *I* get some instruction instead of just giving it all the time, would somebody please rise and tell me?

Shareholder: I could take a shot at that. What I care about as an investor more than the actual profit margin is return on capital. So when I look at the very high returns on capital being generated by very low margin businesses — like Costco, Staples, Home Depot and Dell — the efficiencies squeezing margins at one end are also allowing companies to get rid of massive amounts of inventory and vastly increase their productivity.

And I think PC manufacturing is a sector where pricing's come under *immense* pressure, but as a sector, there have been such vast gains in productivity and all that the returns on *capital* [haven't been hurt]. Obviously, Dell and Gateway have been the biggest beneficiaries because of a superior economic model. But I would argue that throughout the entire industry, efficiencies have increased dramatically and enhanced shareholder value.

So isn't it possible that those efficiencies could actually squeeze margins, increase capital efficiency and reward shareholders?

Munger: Well, that's why I so carefully talked about *average* returns on capital. Obviously, somebody that seizes on a wonderful position aided by a new technology could worm his way into an economic niche that's ungodly profitable like Costco's. But that does not mean that the development of Costco is wonderful for the profits of retailing *generally*.

I would argue that the Costco model is wonderful for *Costco* and it's wonderful for the *consumer*. But as another retailer, I would not look with joy at the coming of Costco to my town — or Wal-Mart either, for that matter.

If we're all going to excel, average returns may not matter.

Munger: I'm talking about average results. Sure — if they send you on 50 missions over Germany to go into the flak and so forth and if you're the one that ... doesn't get shot down, you're going to have a very entertaining 50 missions and it isn't going to hurt you much. But averaged out, it's not a very wonderful activity to be in. I was talking about *average* results in capitalism.

It's quite clear that there will be many big winners in new models of distribution. I think you're totally right on that. But I suspect that averaged out, it's going to squeeze. And I was talking about averaged-out returns for [investors in common stocks].

If everybody in this room could be in the top 10%, then we wouldn't have to worry about average returns, right? But if we *can't*, why then, we face a development which may be squeezing us all.

THE INTERNET WON'T HURT EVERY BUSINESS. AND FOR SOME, THE JURY'S STILL OUT.

Newspapers have more downside today.

Shareholder: Looking out, what do you see as the future of the newspaper industry?

Munger: Well, it's way less certain to be wonderful than it was 20 years ago. And what threatens it, of course, is alternative mediums for delivering information. And they threaten it in two ways: For the person that wants information and the person who wants to buy something.

Every newspaper is trying to arrange to be a big winner in the age of the internet by parlaying its advantage in the area of print and paper into an advantage in a world that's mixed print and paper and internet commerce.

But because that is way less sure than the continued growth of print and paper was 20 years ago, I think the enterprises have more *downside* today. Some people think they have more upside. That's what makes life interesting. But I am less convinced of that.

Shareholder: Do you foresee the demise of the printed paper?

Munger: No, I don't think they'll ever disappear. But

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the fabulous economics could be grievously impaired.

Internet won't be as big a deal for trading of electricity....

Shareholder: You and Warren have said you expect decent returns from MidAmerican. But in thinking about the application of the internet to commodity businesses, it's a little hard to see why that would happen since Warren said at the annual meeting that MidAmerican has no cost advantage.

Munger: Where I grew up in the old days, there was a flour broker named A. Horace Erickson who traded flour out of one office. All of these flour mills, which were the equivalent of electric plants in some respects, would need to balance out flour. So they'd all do these elaborate trades with A. Horace Erickson. It was a very efficient system for flour milling — and it also made A. Horace Erickson rich even though he got a tiny little percentage of each trade.

My point is that the world was capable of doing that with flour back in 1937 with nothing but telephones. And I don't think electricity trading will be *helped* as much by the internet as a lot of other things....

Generation/delivery are more important in this business.

Munger: But the business of generating and delivering massive amounts of electricity — that is the ultimate business requiring a big tangible system as distinguished from just a little information going over wires. So I wouldn't expect the internet to have fabulous changes on a business like that.

Obviously, *anything* can be made more efficient with more bandwidth and more computing power. But I think the delivery and generation is a bigger part of the business. And I just don't think that that is one where the internet's going to have huge incremental effects....

TODAY, WE FACE A *DOUBLE* DISADVANTAGE.
FORTUNATELY, WE HAVE ADVANTAGES, TOO.

Being bigger makes it much harder. It limits our options.

Shareholder: You've spoken about how much harder it is to make a large return on capital with the capital base that Berkshire has now than it would be if it were smaller.

Munger: Yes, although we have no desire to go back to that easier time.

Shareholder: Is that something that in your mind and Warren's mind needs to be reconciled either via buybacks [or dividends]? I know Warren says he must have been on the toilet the last time he thought of paying a dividend. However, with all your cash, whether there are earnings per share now or not, I think it's clear to most observant minds that Berkshire is generating a lot of cash — or will generate a lot of future cash.... So I'm wondering what your thinking is as you look forward. Or is it simply, "We'll have a lot of cash,and we'll produce smaller returns."

Munger: There are *two* things that make it harder now for us in terms of operating in marketable securities. First, we're so big we can only look at pretty big companies. That makes it *much* harder. Our options are limited — and we're going into more competitive areas that are more closely examined by very smart people like Alice Schroeder. [Munger laughs]. People like Alice make it more difficult for us when we get into these bigger companies.

We actually face a *double* disadvantage....

Munger: Plus, I totally agree with Warren's article in *Fortune* which we sent out to Berkshire shareholders. I think the current climate offers probable prospects for the ordinary investor in common stocks that are *way* lower over the next 15 or 20 years than we've been used to over the last 15 or 20 years.

So we face a *double* disadvantage. We've got kind of an irritatingly limited climate in terms of potentiality. And we have restrictions on our own options because we've gotten so rich. Now this isn't my idea of the worst tragedy I've heard of in the history of Western civilization. And you will find us quite *contented* with our disadvantages. Nonetheless, they do affect what we can do.

But we have advantages, too.

Munger: There are also some *good* things in our present position. We have *enormous* flexibility. You're right — Berkshire will be accumulating *billions* of dollars of cash every year. Wesco will be accumulating cash. And we have a structure that allows us enormous flexibility.

Also, unlike a lot of portfolio managers, while we can't buy stock in small companies with any realistic prospects for us because of the size considerations, we get whole companies offered to us now by people who like and are good at running them. And that is not happening at most investment counseling operations. So we have a string to our bow that other people *don't* have. And who *knows* how big that string may eventually get to be.

So we've got great flexibility and a certain discipline in terms of not doing some foolish thing just to be active — discipline in avoiding just doing any damn thing just because you can't stand inactivity. And that's a very advantageous position.

What was it Mr. McCawber used to say? "Something will turn up." And something always *has* turned up for us.

And we are, in a slow kind of way, finding things to do.

Munger: You can say, "Well, but you do odd things — like buying a company that distributes electricity in Iowa and England." You can say, "What the hell is happening at Berkshire Hathaway?"

Well, I think that is a perfectly decent investment.

(continued on next page)

WESCO FINANCIAL'S
CHARLIE MUNGER
(cont'd from preceding page)

Not only that, it gives us a window into a field where a lot of craziness is going on. And we've been good at dealing with some kinds of craziness. Get us into a field where a lot of craziness is going on and we may find something *else* intelligent to do.

So we are, in a slow kind of way, finding things to do. And we do have a flexibility which is very welcome in terms of our overall position.

But don't expect the magic of the *last* 15 years in the *next*.

Munger: So I'm not discouraged. I just don't think it's going to be *anything* like, for you shareholders, in the *next* 15 years — and I'm not talking about what you do with your money elsewhere — what you're used to....

But I think I know many of you well enough to know you don't have that many other wonderful ideas either. In other words, *you* have some of the problem that *we* have.

NOT GETTING RICH FASTEST IS NO TRAGEDY. BUT TRYING TO DO SO CAN *LEAD* TO ONE....

Someone getting richer faster than you is no great tragedy.

Shareholder: The last couple of years have certainly been different than anything I've ever experienced in my lifetime. And I'd just love to hear your frank observations on the silliness that appears to be going on with maybe some psychology mixed in with the answer.

Munger: Well, I think there's one big truth that the typical investment *counselor* will have difficulty recognizing, but the guy who's investing his own money ought to have no trouble recognizing: If you're comfortably rich and you've got a way of investing your money that is overwhelmingly likely to *keep* you comfortably rich and someone else finds some rapidly growing something-or-other and is getting richer a lot faster than you are, that is not a big tragedy.

Don't let the inevitable make you miserable.

Munger: And if you're not comfortable and don't understand the fact that somebody else is getting rich faster, so *what*? How crazy it would be to be made miserable by the fact that someone else is doing better — because someone else is *always* going to be doing better at any human activity you can name. Even Tiger Woods loses a lot of the time.

Look at the trouble Stanley Druckenmiller got into. He thought he was absolutely *required* to always beat everybody else. And even when it seemed kind of silly to him, he thought, "Well, I can't be *out* of it."

Just avoid the *really* big trouble....

Munger: A lot of success in life and success in business comes from knowing what you really want to avoid — like early death and a bad marriage.... There are a lot of things that are *really* big troubles. And if you give them a wide berth, your life works a lot better.

And if somebody else is having a lot of fun with Zsa Zsa Gabor, why, you can say, "Pass this cup from me."

WE WERE LUCKY TO START WHEN WE DID. IT'S LIKELY TO TAKE YOU LONGER....

We were lucky to come into the business when we did....

Shareholder: What would you buy today, if you were 30 years younger, with the capital you had then — which you won't answer, I'm sure.

Munger: I think having a little capital now and being young gives one lower opportunities than, in retrospect, were available to me. I was lucky that I came in in the aftermath of the '30s when people were demoralized, when whole generations didn't want to buy common stocks and trust departments didn't want to hold common stocks. There'd been a lot of bad financial practice in the '20s that made people morally revolted at capitalism. I'm talking about the Insull utility holding companies, etc., etc. and Goldman Sachs' trading company.

As Eddie Cantor said, "They told me to buy this stock for my old age and it worked perfectly. Within six months, I felt like an old man." Coming into investing in that aftermath when there'd been a lot of failure and disgrace was a great advantage to people like Warren and me.

You may be able to *do* it. It's just likely to take *longer*.

Munger: Now a young person starting out today when you've had roughly 20 years of 15% returns from common stocks, way less disgrace, more achievement and so on, I'd say in the nature of things it's somewhat tougher for you for the reasons that Warren outlined in that article that appeared in *Fortune*....

That doesn't mean if you adopt the same catechism — the same mindset that we did, the same patience, the same decisiveness and willingness to bet on the few occasions when you get the wonderful opportunity to bet that you can recognize as such — that you won't do very well. It just means that it's likely to take *longer* in your case.

But what the hell, you will *live* a lot longer.... And it will fill in the years.

—OID

The preceeding excerpt
was the Wesco Financial segment
of this edition's 27-page feature
on the annual meetings
of Berkshire Hathaway and Wesco.