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The Psychology of Human Misjudgment by Charles T. Munger Selections from three of Charlie Munger’s talks, combined into one talk never made, after revisions by Charlie in 2005 that included considerable new material.

The three talks were: (1) The Bray Lecture at the Caltech Faculty Club, February 2, 1992; (2) Talk under the Sponsorship of the Cambridge Center for Behavioral Studies at the Harvard Faculty Club, October 6, 1994; and the extensive revision by Charlie in 2005, made from memory unassisted by any research, occurred because Charlie thought he could do better at age eighty-one than he did more than ten years earlier when he (1) knew less and was more harried by a crowded life and (2) was speaking from rough notes instead of revising transcripts. 3) Talk under the Sponsorship of the Cambridge Center for Behavioral Studies at the Boston Harbor Hotel, April 24, 1995. PREFACE When I read transcripts of my psychology talks given about fifteen years ago, I realized that I could now create a more logical but much longer “ talk,” including most of what I had earlier said. But I immediately saw four big disadvantages. First, the longer “ talk,” because it was written out with more logical completeness, would be more boring and confusing to many people than any earlier talk.

This would happen because I would use idiosyncratic definitions of psychological tendencies in a manner reminiscent of both psychology textbooks and Euclid. And who reads textbooks for fun or revisits Euclid? Second, because my formal psychological knowledge came only from skimming three psychology textbooks about fifteen years ago, I know virtually nothing about any academic psychology later developed. Yet, in a longer talk containing guesses, I would be criticizing much academic psychology.

This sort of intrusion into a professional territory by an amateur would be sure to be resented by professors who would rejoice in finding my errors and might be prompted to respond to my published criticism by providing theirs. Why should I care about new criticism? Well, who likes new hostility from articulate critics with an information advantage? Third, a longer version of my ideas would surely draw some disapproval from people formerly disposed to like me.

Not only would there be stylistic and substantive objections, but also there would be perceptions of arrogance in an old man who displayed much disregard for conventional wisdom while “ popping-off” on a subject in which he had never taken a course. My old Harvard Law classmate, Ed Rothschild, always called such a popping-off “ the shoe button complex,” named for the condition of a family- friend who spoke in oracular style on all subjects after becoming dominant in the shoe button business. Fourth, I might make a fool of myself.

Despite these four very considerable objections, I decided to publish the much-expanded version. Thus, after many decades in which I have succeeded mostly by restricting action to jobs and methods in which I was unlikely to fail, I have now chosen a course of action in which (1) I have no significant personal benefit to gain, (2) I will surely give some pain to family members and friends, and (3) I may make myself ridiculous. Why am I doing this? One reason may be that my nature makes me incline toward diagnosing and talking about errors in conventional wisdom.

And despite years of being smoothed out by the hard knocks that were inevitable for one with my attitude, I don’t believe life ever knocked all the boy’s brashness out of the man. A second reason for my decision is my approval of the attitude of Diogenes when he asked: “ Of what use is a philosopher who never offends anybody? ” My third and final reason is the strongest. I have fallen in love with my way of living out psychology because it has been so useful for me.

And so, before I die, I want to imitate to some extent the bequest practices of three characters: the protagonist in John Bunyan’s Pilgrims Progress, Benjamin Franklin, and my first employer, Ernest Buffett. Bunyan’s character, the knight wonderfully named “ Old Valiant for Truth,” makes the only practical bequest available to him when he says at the end of his life: “ My sword I leave to him who can wear it. ” And like this man, I don’t mind if I have misappraised my sword, provided I have tried to see it correctly, or that many will not wish to try it, or that some who try to wield it may find it serves them not.

Ben Franklin, to my great benefit, left behind his autobiography, his Almanacks, and much else. And Ernest Buffett did the best he could in the same mode when he left behind “ How to Run a Grocery Store and a Few Things I Have Learned about Fishing. ” Whether or not this last contribution to the genre was the best, I will not say. But I will report that I have now known four generations of Ernest Buffett’s descendants and that the results have encouraged my imitation of the founder. I have long been very interested in standard thinking errors. However, I was educated in an era wherein the contributions of non-patient-treating sychology to an understanding of misjudgment met little approval from members of the mainstream elite. Instead, interest in psychology was pretty well confined to a group of professors who talked and published mostly for themselves, with much natural detriment from isolation and groupthink. And so, right after my time at Caltech and Harvard Law School, I possessed a vast ignorance of psychology. Those institutions failed to require knowledge of the subject. And, of course, they couldn’t integrate psychology with their other subject matter when they didn’t know psychology.

Also, like the Nietzsche character who was proud of his lame leg, the institutions were proud of their willful avoidance of “ fuzzy” psychology and “ fuzzy” psychology professors. I shared this ignorant mindset for a considerable time. And so did a lot of other people. What are we to think, for instance, of the Caltech course catalogue that for years listed just one psychology professor, self-described as a “ Professor of Psychoanalytical Studies,” who taught both “ Abnormal Psychology” and “ Psychoanalysis in Literature”? Soon after leaving Harvard, I began a long struggle to get rid of the most dysfunctional part of my psychological ignorance.

Today, I will describe my long struggle for elementary wisdom and a brief summary of my ending notions. After that, I will give examples, many quite vivid and interesting to me, of both psychology at work and antidotes to psychology-based dysfunction. Then, I will end by asking and answering some general questions raised by what I have said. This will be a long talk. When I started law practice, I had respect for the power of genetic evolution and appreciation of man’s many evolution-based resemblances to less cognitively-gifted animals and insects.

I was aware that man was a “ social animal,” greatly and automatically influenced by behavior he observed in men around him. I also knew that man lived, like barnyard animals and monkeys, in limited size dominance hierarchies, wherein he tended to respect authority and to like and cooperate with his own hierarchy members while displaying considerable distrust and dislike for competing men not in his own hierarchy. But this generalized, evolution-based theory structure was inadequate to enable me to cope properly with the cognition I encountered.

I was soon surrounded by much extreme irrationality, displayed in patterns and subpatterns. So surrounded, I could see that I was not going to cope as well as I wished with life unless I could acquire a better theory-structure on which to hang my observations and experiences. By then, my craving for more theory had a long history. Partly, I had always loved theory as an aid in puzzle solving and as a means of satisfying my monkey-like curiosity. And, partly. I had found that theory-structure was a superpower in helping one get what one wanted.

As I had early discovered in school wherein I had excelled without labor, guided by theory, while many others, without mastery of theory, failed despite monstrous effort. Better theory, I thought. had always worked for me and, if now available, could make me acquire capital and independence faster and better assist everything I loved. And so I slowly developed my own system of psychology. more or less in the self-help style of Ben Franklin and with the determination displayed in the refrain of the nursery story: “`Then I’ll do it myself,’ said the little red hen. I was greatly helped in my quest by two turns of mind. First, I had long looked for insight by inversion in the intense manner counseled by the great algebraist, Jacobi: “ Invert, always invert. ” I sought good judgment mostly by collecting instances of bad judgment, then pondering ways to avoid such outcomes. Second, I became so avid a collector of instances of bad judgment that I paid no attention to boundaries between professional territories. After all, why should I search for some tiny, unimportant, hard-to-find new stupidity in my own field when some large, important, asy-to find stupidity was just over the fence in the other fellow’s professional territory? Besides, I could already see that real-world problems didn’t neatly lie within territorial boundaries. They jumped right across. And I was as dubious of any approach that, when two things were inextricably intertwined and interconnected, would try and think about one thing but not the other. I was afraid, if I tried any such restricted approach, that I would end up, in the immortal words of John L. Lewis, “ with no brain at all, just a neck that had haired over. Pure curiosity, somewhat later, made me wonder how and why destructive cults were often able, over a single long weekend, to turn many tolerably normal people into brainwashed zombies and thereafter keep them in that state indefinitely. I resolved that I would eventually find a good answer to this cult question if I could do so by general reading and much musing. I also got curious about social insects. It fascinated me that both the fertile female honeybee and the fertile female harvester ant could multiply their quite different normal life expectancies by exactly twenty by engaging in one gangbang in the sky.

The extreme success of the ants also fascinated me-how a few behavioral algorithms caused such extreme evolutionary success grounded in extremes of cooperation within the breeding colony and, almost always, extremes of lethal hostility toward ants outside the breeding colony; even ants of the same species. Motivated as I was, by midlife I should probably have turned to psychology textbooks, but I didn’t, displaying my share of the outcome predicted by the German folk saving: “ We are too soon old and too late smart. However, as I later found out, I may have been lucky to avoid for so long the academic psychology that was then laid out in most textbooks. These would not then have guided me well with respect to cults and were often written as if the authors were collecting psychology experiments as a boy collects butterflies-with a passion for more butterflies and more contact with fellow collectors and little craving for synthesis in what is already possessed.

When I finally got to the psychology texts, I was reminded of the observation of Jacob Viner, the great economist, that many an academic is like the truffle hound, an animal so trained and bred for one narrow purpose that it is no good at anything else. I was also appalled by hundreds of pages of extremely nonscientific musing about comparative weights of nature and nurture in human outcomes. And I found that introductory psychology texts, by and large, didn’t deal appropriately with a fundamental issue: Psychological tendencies tend to be both numerous and inseparably intertwined, now and forever, as they interplay in life.

Yet the complex parsing out of effects from intertwined tendencies was usually avoided by the writers of the elementary texts. Possibly the authors did not wish, through complexity, to repel entry of new devotees to their discipline. And, possibly, the cause of their inadequacy was the one given by Samuel Johnson in response to a woman who inquired as to what accounted for his dictionary’s misdefinition of the word “ pastern. ” “ Pure ignorance,” Johnson replied. And, finally, the text writers showed little interest in describing standard antidotes to standard psychology-driven folly, and they thus voided most discussion of exactly what most interested me. But academic psychology has some very important merits alongside its defects. I learned this eventually, in the course of general reading, from a book, Influence, aimed at a popular audience, by a distinguished psychology professor, Robert Cialdini, at Arizona State, a very big university. Cialdini had made himself into a super-tenured “ Regents’ Professor” at a very young age by devising, describing, and explaining a vast group of clever experiments in which man manipulated man to his detriment, With all of this made possible by man’s intrinsic thinking flaws.

I immediately sent copies of Cialdini’s book to all my children. I also gave Cialdini a share of Berkshire stock [Class A] to thank him for what he had done for me and the public. Incidentally, the sale by Cialdini of hundreds of thousands of copies of a book about social psychology was a huge feat, considering that Cialdini didn’t claim that he was going to improve your sex life or make you any money. Part of Cialdini’s large book-buying audience came because, like me, it wanted to learn how to become less often tricked by salesmen and circumstances.

However, as an outcome not sought by Cialdini. who is a profoundly ethical man, a huge number of his books were bought by salesmen who wanted to learn how to become more effective in misleading customers. Please remember this perverse outcome when my discussion comes to incentive-caused bias as a consequence of the superpower of incentives. With the push given by Cialdini’s book, I soon skimmed through three much used textbooks covering introductory psychology. I also pondered considerably while craving synthesis and taking into account all my previous raining and experience. The result was Munger’s partial summary of the non-patient-treating, non-nature vs. nurture weighing parts of nondevelopmental psychology. This material was stolen from its various discoverers (most of whose names I did not even try to learn), often with new descriptions and titles selected to fit Munger’s notion of what makes recall easy for Munger, then revised to make Munger’s use easy as he seeks to avoid errors. I will start my summary with a general observation that helps explain what follows.

This observation is grounded in what we know about social insects. The limitations inherent in evolution’s development of the nervoussystem cells that control behavior are beautifully demonstrated by these insects, which often have a mere 100, 000 or so cells in their entire nervous systems, compared to man’s multiple billions of cells in his brain alone. Each ant, like each human, is composed of a living physical structure plus behavioral algorithms in its nerve cells. In the ant’s case, the behavioral algorithms are few in number and almost entirely genetic in origin.

The ant learns a little behavior from experiences, but mostly it merely responds to ten or so stimuli with a few simple responses programmed into its nervous system by its genes, sometimes walk round and round until they perish. It seems obvious, to me at least, that the human brain must often operate counterproductively just like the ant’s, from unavoidable oversimplicity in its mental process, albeit usually in trying to solve problems more difficult than those faced by ants that don’t have to design airplanes.

Naturally, the simple ant behavior system has extreme limitations because of its limited nerve system repertoire. For instance, one type of ant, when it smells a pheromone given off by a dead ant’s body in the hive, immediately responds by cooperating with other ants in carrying the dead body out of the hive. And Harvard’s great E. O. Wilson performed one of the best psychology experiments ever done when he painted dead-ant pheromone on a live ant. Quite naturally; the other ants dragged this useful live ant out of the hive even though it kicked and otherwise protested throughout the entire process.

Such is the brain of the ant. It has a simple program of responses that generally work out all right, but which are imprudently used by rote in many cases. Another type of ant demonstrates that the limited brain of ants can be misled by circumstances as well as by clever manipulation from other creatures. The brain of this ant contains a simple behavioral program that directs the ant, when walking, to follow the ant ahead, and when these ants stumble into walking in a big circle.

The perception system of man clearly demonstrates just such an unfortunate outcome. Man is easily fooled, either by the cleverly thought out manipulation of man, by circumstances occurring by accident, or by very effective manipulation practices that man has stumbled into during “ practice evolution” and kept in place because they work so well. One such outcome is caused by a quantum effect in human perception. If stimulus is kept below a certain level, it does not get through.

And, for this reason, a magician was able to make the Statue of Liberty disappear after a certain amount of magician lingo expressed in the dark. The audience was not aware that it was sitting on a platform that was rotating so slowly, below man’s sensory threshold, that no one could feel the acceleration implicit in the considerable rotation. When a surrounding curtain was then opened in the place on the platform where the Statue had earlier appeared, it seemed to have disappeared. And even when perception does get through to man’s brain, it is often isweighted, because what is registered in perception is in shockingness of apparent contrast, not the standard scientific units that make possible science and good engineering against often-wrong effects from generally useful tendencies in his perception and cognition. A magician demonstrates this sort of contrast based error in your nervous system when he removes your wristwatch without your feeling it. As he does this, he applies pressure of touch on your wrist that you would sense if it was the only pressure of touch you were experiencing.

But he has concurrently applied other intense pressure of touch on your body, but not on your wrist, “ swamping” the wrist pressure by creating a high-contrast touch pressure elsewhere. This high contrast takes the wrist pressure below perception. Some psychology professors like to demonstrate the inadequacy of contrast-based perception by having students put one hand in a bucket of hot water and one hand in a bucket of cold water. They are then suddenly asked to remove both hands and place them in a single bucket of room temperature water.

Now, with both hands in the same water, one hand feels as if it has just been put in cold water and the other hand feels as if it has just been placed in hot water. When one thus sees perception so easily fooled by mere contrast, where a simple temperature gauge would make no error, and realizes that cognition mimics perception in being misled by mere contrast, he is well on the way toward understanding, not only how magicians fool one, but also how life will fool one. This can occur, through deliberate human manipulation or otherwise, if one doesn’t take certain precautions.

Man’s-often wrong but generally useful psychological tendencies are quite numerous and quite different. The natural consequence of this profusion of tendencies is the grand general principle of social psychology: cognition is ordinarily situation-dependent so that different situations often cause different conclusions, even when the same person is thinking in the same general subject area. With this introductory instruction from ants, magicians, and the grand general principle of social psychology; I will next simply number and list psychology-based tendencies that, while generally useful, often mislead.

Discussion of errors from each tendency will come later, together with description of some antidotes to errors, followed by some general discussion. Here are the tendencies: One: Reward and Punishment Superresponse Tendency Two: Liking/Loving Tendency Three: Disliking/Hating Tendency Four: Doubt-Avoidance Tendency Five: Inconsistency-Avoidance Tendency Six: Curiosity Tendency Seven: Kantian Fairness Tendency Eight: Envy/Jealousy Tendency Nine: Reciprocation Tendency Ten: Influence-from-Mere Association Tendency Eleven: Simple, Pain-Avoiding Psychological Denial Twelve: Excessive Self-Regard Tendency

Thirteen: Overoptimism Tendency Fourteen: Deprival-Superreaction Tendency Fifteen: Social-Proof Tendency Sixteen: Contrast-Misreaction Tendency Seventeen: Stress-Influence Tendency Eighteen: Availability-Misweighing Tendency Nineteen: Use-It-or-Lose-It Tendency Twenty: Drug-Misinfluence Tendency Twenty-One: Tendency Senescence-Misinfluence Twenty-Two: Authority-Misinfluence Tendency Twenty-Three: Twaddle Tendency Twenty-Four: Twenty-Five: Reason-Respecting Tendency Lollapalooza Tendency-The Tendency to Get Extreme Confluences of Psychological Tendencies Acting in Favor of a Particular Outcome

One: Reward and Punishment Superresponse Tendency I place this tendency first in my discussion because almost everyone thinks he fully recognizes how important incentives and disincentives are in changing cognition and behavior. But this is not often so. For instance, I think I’ve been in the top five percent of my age cohort almost all my adult life in understanding the power of incentives, and vet I’ve always underestimated that power. Never a year passes but I get some surprise that pushes a little further my appreciation of incentive superpower.

One of my favorite cases about the power of incentives is the Federal Express case. The integrity of the Federal Express system requires that all packages be shifted rapidly among airplanes in one central airport each night. And the system has no integrity for the customers if the night work shift can’t accomplish its assignment fast. And Federal Express had one hell of a time getting the night shift to do the right thing. They tried moral suasion. They tried everything in the world without luck.

And, finally, somebody, got the happy thought that it was foolish to pay the night shift by the hour when what the employer wanted was not maximized billable hours of employee service but fault-free, rapid performance of a particular task. Maybe, this person thought, if they paid the employees per shift and let all night shift employees go home when all the planes were loaded, the system would work better. And, to and behold, that solution worked. Early in the history of Xerox, Joe Wilson, who was then in the government, had a similar xperience. He had to go back to Xerox because he couldn’t understand why its new machine was selling so poorly in relation to its older and inferior machine. When he got back to Xerox, he found out that the commission arrangement with the salesmen gave a large and perverse incentive to push the inferior machine on customers, who deserved a better result. And then there is the case of Mark Twain’s cat that, after a bad experience with a hot stove, never again sat on a hot stove, or a cold stove either.

We should also heed the general lesson implicit in the injunction of Ben Franklin in Poor Richard’s Almanack: “ If you would persuade, appeal to interest and not to reason. ” This maxim is a wise guide to a great and simple precaution in life: Never, ever, think about something else when you should be thinking about the power of incentives. I once saw a very smart house counsel for a major investment bank lose his job, with no moral fault, because he ignored the lesson in this maxim of Franklin.

This counsel failed to persuade his client because he told him his moral duty, as correctly conceived by the counsel, without also telling the client in vivid terms that he was very likely to be clobbered to smithereens if he didn’t behave as his counsel recommended. As a result, both client and counsel lost their careers. We should also remember how a foolish and willful ignorance of the superpower of rewards caused Soviet communists to get their final result as described by one employee: “ They pretend to pay us and we pretend to work. Perhaps the most important rule in management is “ Get the incentives right. ” But there is some limit to a desirable emphasis on incentive superpower. One case of excess emphasis happened at Harvard, where B. E. Skinner, a psychology professor, finally made himself ridiculous. At one time, Skinner may have been the best-known psychology professor in the world. He partly deserved his peak reputation because his early experiments using rats and pigeons were ingenious, and his results were both counterintuitive and important.

With incentives, he could cause more behavior change, culminating in conditioned reflexes in his rats and pigeons, than he could in any other way. He made obvious the extreme stupidity, in dealing with children or employees, of rewarding behavior one didn’t want more of. Using food rewards, he even caused strong superstitions, predesigned by himself, in his pigeons. He demonstrated again and again a great recurring, generalized behavioral algorithm in nature: “ Repeat behavior that works. ” He also demonstrated that prompt rewards worked much better than delayed rewards in changing and maintaining behavior.

And, once his rats and pigeons had conditioned reflexes, caused by food rewards, he found what withdrawal pattern of rewards kept the reflexive behavior longest in place: random distribution. With this result, Skinner thought he had pretty well explained man’s misgambling compulsion whereunder he often foolishly proceeds to ruin. But, as we shall later see when we discuss other psychological tendencies that contribute to misgambling compulsion, he was only partly right. Later, Skinner lost most of his personal reputation (a) by overclaiming for incentive superpower to the point of thinking he could reate a human utopia with it and (b) by displaying hardly any recognition of the power of the rest of psychology. He thus behaved like one of Jacob Viner’s truffle hounds as he tried to explain everything with incentive effects. Nonetheless, Skinner was right in his main idea: Incentives are superpowers. The outcome of his basic experiments will always remain in high repute in the annals of experimental science. And his method of monomaniacal reliance on rewards, for many decades after his death, did more good than anything else in improving autistic children.

When I was at Harvard Law School, the professors sometimes talked about an overfocused, Skinner-like professor at Yale Law School. They used to say: “ Poor old Eddie Blanchard, he thinks declaratory judgments will cure cancer. ” Well, that’s the way Skinner got with his very extreme emphasis on incentive superpower. I always call the “ Johnny-one-note” turn of mind that eventually , o diminished Skinner’s reputation the man-with-a-hammer tendency, after the folk saying: “ To a man with only a hammer every problem looks pretty much like a nail. Man-with-a-hammer tendency does not exempt smart people like Blanchard and Skinner. And it won’t exempt you if you don’t watch out. I will return to man-with-a-hammer Tendency at various times in this talk because, fortunately, there are effective antidotes that reduce he ravages of what pretty much ruined the personal reputation of the brilliant Skinner. One of the most important consequences of incentive superpower is what I call “ incentive caused bias. A man has an acculturated nature creaking him a pretty decent fellow, and yet, driven both consciously and subconsciously by incentives, he drifts into immoral behavior in order to get what he wants, a result he facilitates by rationalizing his bad behavior, like the salesmen at Xerox who harmed customers in order to maximize their sales commissions. Here, my early education involved a surgeon who over the years sent bushel baskets full of normal gall bladders down to the pathology lab in the leading hospital in Lincoln, Nebraska, my grandfather’s town.

And, with that permissive quality control for which community hospitals are famous, many years after this surgeon should’ve been removed from the medical staff, he was. One of the doctors who participated in the removal was a family friend, and I asked him: “ Did this surgeon think, `Here’s a way for me to exercise my talents’-this guy was very skilled technically, and make a high living by doing a few maimings and murders every year in the course of routine fraud? “‘ And my friend answered: “ Hell no, Charlie.

He thought that the gall bladder was the source of all medical evil, and, if you really loved your patients, you couldn’t get that organ out rapidly enough. ” Now that’s an extreme case, but in lesser strength, the cognitive drift of that surgeon is present in every profession and in every human being. And it causes perfectly terrible behavior. Consider the presentations of brokers selling commercial real estate and businesses. I’ve never seen one that I thought was even within hailing distance of objective truth.

In my long life, I have never seen a management consultant’s report that didn’t end with the same advice: “ This problem needs more management consulting services. ” Widespread incentive-caused bias requires that one should often distrust, or take with a grain of salt, the advice of one’s professional advisor, even if he is an engineer. The general antidotes here are: (1) especially fear professional advice when it is especially good for the advisor; (2) learn and use the basic elements of your advisor’s trade as you deal with your advisor; nd (3) double check, disbelieve, or replace much of what you’re told, to the degree that seems appropriate after objective thought. The power of incentives to cause rationalized, terrible behavior is also demonstrated by Defense Department procurement history. After the Defense Department had much truly awful experience with misbehaving contractors motivated under contracts paying on a cost-plus-a-percentage-of cost basis, the reaction of our republic was to make it a crime for a contracting officer in the Defense Department to sign such a contract, and not only a crime, but a felony.

And, by the way, although the government was right to create this new felony, much of the way the rest of the world is run, including the operation of many law firms and a lot of other firms, is still under what is, in essence, a cost-plus-a-percentage-of-cost reward system. And human nature, bedeviled by incentive-caused bias, causes a lot of ghastly abuse under these standard incentive patterns of the world. And many of the people who are behaving terribly you would be glad to have married into your family, compared to what you’re otherwise likely to get.

Now there are huge implications from the fact that the human mind is put together this way. One implication is that people who create things like cash registers, which make dishonest behavior hard to accomplish, are some of the effective saints of our civilization because, as Skinner so well knees; bad behavior is intensely habit-forming when it is rewarded. And so the cash register was a great moral instrument when it was created. And, by the way, Patterson, the great evangelist of the cash register, knew that from his own experience.

He had a little store, and his employees were stealing him blind, so that he never made any money. Then people sold him a couple of cash registers, and his store went to profit immediately. He promptly closed the store and went into the cash register business, creating what became the mighty National Cash Register Company, one of the glories of its time. “ Repeat behavior that works” is a behavioral guide that really succeeded for Patterson, after he applied one added twist. And so did high moral cognition.

An eccentric, inveterate do-gooder (except when destroying competitors, all of which he regarded as would-be patent thieves). Patterson, like Carnegie, pretty well gave away all his money to charity before he died, always pointing\_ out that “ shrouds have no pockets. ” So great was the contribution of Patterson’s cash register to civilization, and so effectively did he improve the cash register and spread its use, that in the end, he probably deserved the epitaph chosen for the Roman poet Horace: “ I did not completely die. “

The strong tendency of employees to rationalize bad conduct in order to get rewards requires many antidotes in addition to the good cash control promoted by Patterson. Perhaps the most important of these antidotes is use of sound accounting theory and practice. This was seldom better demonstrated than at Westinghouse, which had a subsidiary that made loans having no connection to the rest of Westinghouse’s businesses. The officers of Westinghouse, perhaps influenced by envy of General Electric, wanted to expand profits from loans to outsiders.

Under Westinghouse’s accounting practice, provisions for future credit losses on these loans depended largely on the past credit experience of its lending subsidiary, which mainly made loans unlikely to cause massive losses. Now there are two special classes of loans that naturally cause much trouble for lenders. The first is ninety-five percent-of-value construction loans to any kind of real estate developer, and the second is any kind of construction loan on a hotel.

So, naturally, if one was willing to loan approximately ninety-five percent of the real cost to a developer constructing a hotel, the loan would bear a much higher-than-normal interest rate because the credit loss danger would be much higher than normal. So, sound accounting for Westinghouse in making a big, new mass of ninetyfive percent-of-value construction loans to hotel developers would have been to report almost no profit, or even a loss, on each loan until, years later, the loan became clearly worth par.

But Westinghouse instead plunged into bigtime construction lending on hotels, using accounting that made its lending officers look good because it showed extremely high starting income from loans that were very inferior to the loans from which the company had suffered small credit losses in the past. This terrible accounting -, vas allowed by both international and outside accountants for Westinghouse as they displayed the conduct predicted by the refrain: “ Whose bread I eat, his song I sing. ” The result was billions of dollars of losses. Who was at fault?

The guy from the refrigerator division, or some similar division, who as lending officer vas suddenly in charge of loans to hotel developers: Or the accountants and other senior people who tolerated a nearly insane incentive structure, almost sure to trigger incentive-caused bias in a lending officer: My answer puts most blame on the accountants and other senior people who created the accounting system. These people became the equivalent of an armored car cash carrying service that suddenly decided to dispense with vehicles and have unarmed midgets hand-carry its customers’ cash through lums in open bushel baskets. I wish I could tell you that this sort of thing no longer happens, but this is not so. After Westinghouse blew up, General Electric’s Kidder Peabody subsidiary put a silly computer program in place that allowed a bond trader to show immense fictional profits. And after that, much accounting became even worse, perhaps reaching its nadir at Enron. And so incentive-caused bias is a huge, important thing, with highly important antidotes, like the cash register and a sound accounting system.

But when I came years ago to the psychology texts, I found that, while they were about one thousand pages long, there was as little therein that dealt with incentive-caused bias and no mention of Patterson or sound accounting systems. Somehow incentive-caused bias and its antidotes pretty well escaped the standard survey courses in psychology, even though incentive-caused bias had long been displayed prominently in much of the world’s great literature, and antidotes to it had long existed in standard business routines.

In the end, I concluded that when something was obvious in life but not easily demonstrable in certain kinds of easy todo, repeatable academic experiments, the truffle hounds of psychology very often missed it. In some cases, other disciplines showed more interest in psychological tendencies than did psychology, at least as explicated in psychology textbooks. For instance, economists, speaking from the employer’s point of view, have long had a name for the natural results of incentive-caused bias: “ agency cost. As the name implies, the economists have typically known that, just as grain is always lost to rats, employers always lose to employees who improperly think of themselves first. Employer installed antidotes include tough internal audit systems and severe public punishment for identified miscreants, as well as misbehavior-preventing routines and such machines as cash registers. From the employee’s point of view, incentivecaused bias quite naturally causes opposing abuse from the employer: the sweatshop, the unsafe work place, etc.

And these bad results for employees have antidotes not only in pressure from unions but also in government action, such as wage and hour laws, work-place-safety rules, measures fostering unionization, and workers’ compensation systems. Given the opposing psychology-induced strains that naturally, occur in employment because of incentive-caused bias on both sides of the relationship, it is no wonder the Chinese are so much into Yin and Yang. The inevitable ubiquity of incentive-caused bias has vast, generalized consequences.

For instance, a sales force living only on commissions will be much harder to keep moral than one under less pressure from the compensation arrangement. On the other hand, a purely commissioned sales force may well be more efficient per dollar spent. Therefore, difficult decisions involving trade-offs are common in creating compensation arrangements in the sales function. The extreme success of free-market capitalism as an economic system owes much to its prevention of many of bad effects from incentive-caused bias.

Most capitalist owners in a vast web of free market economic activity are selected for ability by surviving in a brutal competition with other owners and have a strong incentive to prevent all waste in operations within their ownership. After all, they live on the difference between their competitive prices and their overall costs and their businesses will perish if costs exceed sales. Replace such owners by salaried employees of the state nd you will normally get a substantial reduction in overall efficiency as each employee who replaces an owner is subject to incentive-caused bias as he determines what service he will give in exchange for his salary and how much he will yield to peer pressure from many fellow employees who do not desire his creation of any strong performance model. Another generalized consequence of incentive caused bias is that man tends to “ game” all human systems, often displaying great ingenuity in wrongly serving himself at the expense of others.

Antigaming features, therefore, constitute a huge and necessary part of almost all system design. Also needed in system design is an admonition: Dread, and avoid as much you can, rewarding people for w -hat can be easily faked. Yet our legislators and judges, usually including many lawyers educated in eminent universities, often ignore this injunction. And society consequently pays a huge price in the deterioration of behavior and efficiency, as well as the incurrence of unfair costs and wealth transfers.

If education were improved, with psychological reality becoming better taught and assimilated, better system design might well come out of our legislatures and courts. Of course, money is now the main reward that drives habits. A monkey can be trained to seek and work for an intrinsically worthless token, as if it -ere a banana, if the token is routinely exchangeable for a banana. So it is also with humans working for money-only more so, because human money is exchangeable for many desired things in addition to food, and one ordinarily, gains status from either holding or spending it.

Moreover, a rich person will often, through habit, work or connive energetically for more money long after he has almost no real need for more. Averaged out, money is a mainspring of modern civilization, having little precedent in the behavior of nonhuman animals. Money rewards are also intertwined with other forms of reward. For instance, some people use money to buy status and others use status to get money, while still others sort of do both things at the same time. Although money is the main driver among rewards, it is not the only, reward that works.

People also change their behavior and cognition for sex, friendship, companionship, advancement in status, and other nonmonetary items. “ Granny’s Rule” provides another example of reward superpower, so extreme in its effects that it must be mentioned here. You can successfully manipulate your own behavior with this rule, even if you are using as rewards items that you already possess! Indeed, consultant Ph. D. psychologists often urge business organizations to improve their reward systems by teaching executives to use “ Granny’s Rule” to govern their own daily behavior.

Granny’s Rule, to be specific, is the requirement that children eat their carrots before they get dessert. And the business version requires that executives force themselves daily to first do their unpleasant and necessary tasks before rewarding themselves by proceeding to their pleasant tasks. Given reward superpower, this practice is nice and sound. Moreover, the rule can also be used in the nonbusiness part of life. The emphasis on daily, use of this practice is not accidental. The consultants well know, after the teaching of Skinner, that prompt rewards work best.

Punishments, of course, also strongly influence behavior and cognition, although not so flexibly and wonderfully as rewards. For instance, illegal price fixing was fairly common in America when it was customarily punished by modest fines. Then, after a few prominent business executives were removed from their eminent positions and sent to federal prisons, price-fixing behavior was greatly reduced. Military and naval organizations have very often been extreme in using punishment to change behavior, probably because they needed to cause extreme behavior.

Around the time of Caesar, there was a European tribe that, when the assembly horn blew, always killed the last warrior to reach his assigned place, and no one enjoyed fighting this tribe. And George Washington hanged farm-boy deserters forty feet high as an example to others who might contemplate desertion. Liking/Loving Tendency A newly hatched baby goose is programmed, through the economy of its genetic program, to “ love” and follow the first creature that is nice to it, which is almost always its mother.

But, if the mother goose is not present right after the hatching, and a man is there instead, the gosling will “ love” and follow the man, who becomes a sort of substitute mother. Somewhat similarly, a newly arrived human is “ born to like and love” under the normal and abnormal triggering outcomes for its kind. Perhaps the strongest inborn tendency to love-ready to be triggered-is that of the human mother for its child. On the other hand, the similar “ child-loving” behavior of a mouse can be eliminated by the deletion of a single gene, which suggests there is some sort of triggering gene in a mother mouse as well as in a gosling.

Each child, like a gosling, will almost surely come to like and love, not only as driven by its sexual nature, but also in social groups not limited to its genetic or adoptive “ family. ” Current extremes of romantic love almost surely did not occur in man’s remote past. Our early human ancestors were surely more like apes triggered into mating in a pretty mundane fashion. And what will a man naturally come to like and love, apart from his parent, spouse and child? Well. he will like and love being liked and loved.

And so many a courtship competition will be won by a person displaying exceptional devotion, and man will generally strive, lifelong, for the affection and approval of many people not related to him. One very practical consequence of Liking/Loving Tendency is that it acts as a conditioning device that makes the liker or lover tend (1) to ignore faults of, and comply with wishes of, the object of his affection, (2) to favor people, products, and actions merely associated with the object of his affection (as we shall see when we get to “ Influence-from-Mere-Association Tendency,” and (3) to distort other facts to facilitate love.

There are large social policy implications in the amazingly good consequences that ordinarily come from people likely to trigger extremes of love and admiration boosting each other in a feedback mode. For instance, it is obviously desirable to attract a lot of lovable, admirable people into the teaching profession. The phenomenon of liking and loving causing admiration also works in reverse. Admiration also causes or intensifies liking or love. With this “ feedback mode” in place, the consequences are often extreme, sometimes even causing deliberate self-destruction to help what is loved.

Disliking/Hating Tendency In a pattern obverse to Liking/Loving Tendency, the newly arrived human is also “ born to dislike and hate” as triggered by normal and abnormal triggering forces in its life. It is the same with most apes and monkeys. Liking or loving, intertwined with admiration in a feedback mode, often has vast practical consequences in areas far removed from sexual attachments. For instance, a man who is so constructed that he loves admirable persons and ideas with a special intensity has a huge advantage in life.

This blessing came to both Buffett and myself in large measure, sometimes from the same persons and de as. One common, beneficial example for us both was Warren’s uncle, Fred Buffett, who cheerfully did the endless grocery-store work that Warren and I ended up admiring from a safe distance. Even now, after I have known so many other people, I doubt if it is possible to be a nicer man than Fred Buffett was, and he changed me for the better. As a result, the long history of man contains almost continuous war.

For instance, most American Indian tribes warred incessantly, and some tribes would occasionally bring captives home to women so that all could join in the fun of torturing captives to death. Even with the spread of religion, and the advent of advanced civilization, much modern war remains pretty savage. But we also get what we observe in present-day Switzerland and the United States, wherein the clever political arrangements of man “ channel” the hatreds and dislikings of individuals and groups into nonlethal patterns including elections. But the dislikings and hatreds never go away completely. Born into an, these driving tendencies remain strong. Thus, we get maxims like the one from England: “ Politics is the art of marshalling hatreds. ” And we also get the extreme popularity of very negative political advertising in the United States. At the family level, we often see one sibling hate his other siblings and litigate with them endlessly if he can afford it. Indeed, a wag named Buffett has repeatedly explained to me that “ a major difference between rich and poor people is that the rich people can spend their lives suing their relatives. ” My father’s law practice in Omaha was full of such intrafamily hatreds.

And when I got to the Harvard Law School and its professors taught me “ property lay” with no mention of sibling rivalry in the family business, I appraised the School as a pretty unrealistic place that wore “ blinders” like the milk-wagon horses of yore. My current guess is that sibling rivalry has not yet made it into property law as taught at Harvard. Disliking/Hating Tendency also acts as a conditioning device that makes the disliker/hater tend to (1) ignore virtues in the object of dislike, (2) dislike people, products, and actions merely associated with the object of his dislike, and (3) distort other facts to facilitate hatred.

Distortion of that kind is often so extreme that miscognition is shockingly large. When the world Trade Center was destroyed, many Pakistanis immediately concluded that the Hindus did it, while many Muslims concluded that the Jews did it. Such factual distortions often make mediation between opponents locked in hatred either difficult or impossible. Mediations between Israelis and Palestinians are difficult because facts in one side’s, history overlap very little with facts from the other side’s. Doubt-Avoidance Tendency The brain of man is programmed with a tendency to quickly remove doubt by reaching some decision.

It is easy to see how evolution would make animals, over the eons, drift toward such quick elimination of doubt. After all, the one thing that is surely counterproductive for a prey animal that is threatened by a predator is to take a long time in deciding what to do. And so man’s Doubt Avoidance Tendency is quite consistent with the history of his ancient, nonhuman ancestors. So pronounced is the tendency in man to quickly remove doubt by reaching some decision that behavior to counter the tendency is required from judges and jurors. Here, delay before decision making is forced.

And one is required to so comport himself, prior to conclusion time, so that he is wearing a “ mask” of objectivity. And the “ mask” works to help real objectivity along, as we shall see when we next consider man’s Inconsistency-Avoidance Tendency. Of course, once one has recognized that man has a strong DoubtAvoidance Tendency, it is logical to believe that at least some leaps of religious faith are greatly boosted by this tendency. Even if one is satisfied that his own faith comes from revelation, one still must account for the inconsistent faiths of others.

And man’s Doubt-Avoidance Tendency is almost surely a big part of the answer. What triggers Doubt-Avoidance Tendency? Well, an unthreatened man, thinking of nothing in particular, is not being prompted to remove doubt through rushing to some decision. As we shall see later when we get to Social-Proof Tendency and Stress-Influence Tendency, what usually triggers Doubt-Avoidance Tendency is some combination of (1) puzzlement and (2) stress. And both of these factors naturally occur in facing religious issues. Thus, the natural state of most men is in some form of religion.

And this is what we observe. Inconsistency-Avoidance Tendency The brain of man conserves programming space by being reluctant to change, which is a form of inconsistency avoidance. We see this in all human habits, constructive and destructive. Few people can list a lot of bad habits that they have eliminated, and some people cannot identify even one of these. Instead, practically every one has a great many bad habits he has long maintained despite their being known as bad. Given this situation, it is not too much in many cases to appraise early-formed habits as destiny.

When Marley’s miserable ghost says, “ I wear the chains I forged in life,” he is talking about chains of habit that were too light to be felt before they became too strong to be broken. The rare life that is wisely lived has in it many good habits maintained and many bad habits avoided or cured. And the great rule that helps here is again from Franklin’s Poor Richard’s Almanack: “ An ounce of prevention is worth a pound of cure. ” What Franklin is here indicating, in part, is that Inconsistency-Avoidance Tendency makes it much easier to prevent a habit than to change it.

Also tending to be maintained in place by the anti-change tendency of the brain are one’s previous conclusions, human loyalties, reputational identity, commitments, accepted role in a civilization, etc. It is not entirely clear why evolution would program into man’s brain an anti-change mode alongside his tendency to quickly remove doubt. My guess is the anti-change mode was significantly caused by a combination of the following factors: (1) It facilitated faster decisions when speed of decision was an important contribution to the survival of nonhuman ancestors that were prey. 2) It facilitated the survival advantage that our ancestors gained by cooperating in groups, which would have been more difficult to do if everyone was always changing responses. (3) It was the best form of solution that evolution could get to in the limited number of generations between the start of literacy and today’s complex modern life. It is easy to see that a quickly reached conclusion, triggered by DoubtAvoidance Tendency, when combined with a tendency to resist any change in that conclusion, will naturally cause a lot of errors in cognition for modern man.

And so it observably works out. We all deal much with others whom we correctly diagnose as imprisoned in poor conclusions that are maintained by mental habits they formed early and will carry to their graves. So great is the bad-decision problem caused by Inconsistency-Avoidance Tendency that our courts have adopted important strategies against it. For instance, before making decisions, judges and juries are required to hear long and skillful presentations of evidence and argument from the side they will not naturally favor, given their ideas in place.

And this helps prevent considerable bad thinking from “ first conclusion bias. ” Similarly, other modern decision makers will often force groups to consider skillful counterarguments before making decisions. And proper education is one long exercise in augmentation of high cognition so that our wisdom becomes strong enough to destroy wrong thinking, maintained by resistance to change. As Lord Keynes pointed out about his exalted intellectual group at one of the greatest universities in the world, it was not the intrinsic difficulty of new ideas that prevented their acceptance.

Instead, the new ideas were not accepted because they were inconsistent with old ideas in place. What Keynes was reporting is that the human mind works a lot like the human egg. When one sperm gets into a human egg, there’s an automatic shut-off device that bars any other sperm from getting in. The human mind tends strongly toward the same sort of result. And so, people tend to accumulate large mental holdings of fixed conclusions and attitudes that are not often reexamined or changed, even though there is plenty of good evidence that they are wrong.

Moreover, this doesn’t just happen in social science departments, like the one that once thought Freud should serve as the only choice as a psychology teacher for Caltech. Holding to old errors even happens, although with less frequency and severity, in hard science departments. We have no less an authority for this than Max Planck, Nobel laureate, finder of “ Planck’s constant. ” Planck is famous not only for his science but also for saying that even in physics the radically new ideas are seldom really accepted by the old guard. Instead, said Planck, the progress is made by a ew generation that comes along, less brain-blocked by its previous conclusions. Indeed, precisely this sort of brain-blocking happened to a degree in Einstein. At his peak, Einstein was a great destroyer of his own ideas, but an older Einstein never accepted the full implications of quantum mechanics. One of the most successful users of an antidote to first conclusion bias was Charles Darwin. He trained himself, early, to intensively consider any evidence tending to disconfirm any hypothesis of his, more so if he thought his hypothesis was a particularly good one.

The opposite of what Darwin did is now called confirmation bias, a term of opprobrium. Darwin’s practice came from his acute recognition of man’s natural cognitive faults arising from Inconsistency-Avoidance Tendency. He provides a great example of psychological insight correctly used to advance some of the finest mental work ever done. Inconsistency-Avoidance Tendency has many good effects in civilization. For instance, rather than act inconsistently with public commitments, new or old public identities, etc. most people are more loyal in their roles in life as priests, physicians, citizens, soldiers, spouses, teachers, employees, etc. One corollary of Inconsistency-Avoidance Tendency is that a person making big sacrifices in the course of assuming a new identity will intensify his devotion to the new identity. After all, it would be quite inconsistent behavior to make a large sacrifice for something that was no good. And thus civilization has invented many tough and solemn initiation ceremonies, often public in nature, that intensify new commitments made.

Tough initiation ceremonies can intensify bad contact as well as good. The loyalty of the new, “ made-man” mafia member, or of the military officer making the required “ blood oath” of loyalty to Hitler, was boosted through the triggering of Inconsistency-Avoidance Tendency. Moreover, the tendency will often make man a “ patsy” of manipulative “ compliance-practitioners,” who gain advantage from triggering his subconscious Inconsistency-Avoidance Tendency. Few people demonstrated this process better than Ben Franklin.

As he was rising from obscurity in Philadelphia and wanted the approval of some important man, Franklin would often maneuver that man into doing Franklin some unimportant favor, like lending Franklin a book. Thereafter, the man would admire and trust Franklin more because a nonadmired and nontrusted Franklin would be inconsistent with the appraisal implicit in lending Franklin the book. During the Korean War, this technique of Franklin’s was the most important feature of the Chinese brainwashing system that was used on enemy prisoners.

Small step by small step, the technique often worked better than torture in altering prisoner cognition in favor of Chinese captors. The practice of Franklin, whereunder he got approval from someone by maneuvering him into treating Franklin favorably, works viciously well in reverse. When one is maneuvered into deliberately hurting some other person, one will tend to disapprove or even hate that person. This effect, from Inconsistency-Avoidance Tendency, accounts for the insight implicit in the saying: “ A man never forgets where he has buried the hatchet. The effect accounts for much prisoner abuse by guards, increasing their dislike and hatred for prisoners that exists as a consequence of the guards’ reciprocation of hostility from prisoners who are treated like animals. Given the psychology-based hostility natural in prisons between guards and prisoners, an intense, continuous effort should be made (1) to prevent prisoner abuse from starting and (2) to stop it instantly when it starts because it will grow by feeding on itself, like a cluster of infectious disease.

More psychological acuity on this subject, aided by more insightful teaching, would probably improve the overall effectiveness of the U. S. Army. So strong is Inconsistency-Avoidance Tendency that it will often prevail after one has merely pretended to have some identity, habit, or conclusion. Thus, for a while, many an actor sort of believes he is Hamlet, Prince of Denmark. And many a hypocrite is improved by his pretensions of virtue. And many a judge and juror, while pretending objectivity, is gaining objectivity. And many a trial lawyer or other advocate comes to believe what he formerly only pretended to believe.

While Inconsistency-Avoidance Tendency, with its “ status quo bias,” immensely harms sound education, it also causes much benefit. For instance, a near-ultimate inconsistency would be to teach something to others that one did not believe true. And so, in clinical medical education, the learner is forced to “ see one, do one, and then teach one,” with the teaching pounding the learning into the teacher. Of course, the power of teaching to influence the cognition of the teacher is not always a benefit to society. When such power flows into political and cult evangelism, there are often bad consequences.

For instance, modern education often does much damage when young students are taught dubious political notions and then enthusiastically push these notions on the rest of us. The pushing seldom convinces others. But as students pound into their mental habits what they are pushing out, the students are often permanently damaged. Educational institutions that create a climate where much of this goes on are, I think, irresponsible. It is important not to thus put one’s brain in chains before one has come anywhere near his full potentiality as a rational person. Curiosity Tendency

There is a lot of innate curiosity in mammals, but its nonhuman version is highest among apes and monkeys. Man’s curiosity, in turn, is much stronger than that of his simian relatives. In advanced human civilization, culture greatly increases the effectiveness of curiosity in advancing knowledge. For instance, Athens (including its colony, Alexandria) developed much math and science out of pure curiosity while the Romans made almost no contribution to either math or science. They instead concentrated their attention on the “ practical” engineering of mines, roads, aqueducts, etc.

Curiosity, enhanced by the best of modern education (which is by definition a minority part in many places), much helps man to prevent or reduce bad consequences arising from other psychological tendencies. The curious are also provided with much fun and wisdom long after formal education has ended. Kantian Fairness Tendency Kant was famous for his “ categorical imperative,” a sort of a “ golden rule” that required humans to follow those behavior patterns that, if followed by all others, would make the surrounding human system work best for everybody. And it is not too much to say that modern acculturated man isplays, and expects from others, a lot of fairness as thus defined by Kant. In a small community having a one-way bridge or tunnel for autos, it is the norm in the United States to see a lot of reciprocal courtesy, despite the absence of signs or signals. And many freeway drivers, including myself, will often let other drivers come in front of them, in lane changes or the like, because that is the courtesy they desire when roles are reversed. Moreover, there is, in modern human culture, a lot of courteous lining up by strangers so that all are served on a “ first-come-first-served” basis.

Also, strangers often voluntarily share equally in unexpected, unearned good and bad fortune. And, as an obverse consequence of such “ fairsharing” conduct, much reactive hostility occurs when fairsharing is expected yet not provided. It is interesting how the world’s slavery was pretty well abolished during the last three centuries after being tolerated for a great many previous centuries during which it coexisted with the world’s major religions. My guess is that Kantian Fairness Tendency was a major contributor to this result. Envy/Jealousy Tendency

A member of a species designed through evolutionary process to want oftenscarce food is going to be driven strongly toward getting food when it first sees food. And this is going to occur often and tend to create some conflict when the food is seen in the possession of another member of the same species. This is probably the evolutionary origin of the envy/jealousy Tendency that lies so deep in human nature. Sibling jealousy is clearly very strong and usually greater in children than adults. It is often stronger than jealousy directed at strangers. Kantian Fairness Tendency probably contributes to this result.

Envy/jealousy is extreme in myth, religion, and literature wherein, in account after account, it triggers hatred and injury. It was regarded as so pernicious by the Jews of the civilization that preceded Christ that it was forbidden, by phrase after phrase, in the laws of Moses. You were even warned by the Prophet not to covet your neighbor’s donkey. And envy/jealousy is also extreme in modern life. For instance, university communities often go bananas when some universit