

The intimate contest for self-command

THOMAS C. SCHELLING

You will come first of all to the Sirens, who are enchanters of all mankind and whoever comes their way; and that man who unsuspecting approaches them, and listens to the Sirens singing, has no prospect of coming home and delighting his wife and little children as they stand about him in greeting, but the Sirens by the melody of their singing enchant him. They sit in their meadow, but the beach before it is piled with boneheaps of men now rotted away, and the skins shrivel upon them. You must drive straight on past, but melt down sweet wax of honey and with it stop your companions' ears, so none can listen; the rest, that is, but if you yourself are wanting to hear them, then have them tie you hand and foot on the fast ship, standing upright against the mast with the ropes' ends lashed around it, so that you can have joy in hearing the song of the Sirens; but if you supplicate your men and implore them to set you free, then they must tie you fast with even more lashings.

*The Odyssey of Homer, Book XII, Lines 39-54.
Richmond Lattimore trans., Harper and Row, 1965, p. 186.*

I

do not know whether more people watched football on New Year's than any other day of the season, but I am sure that more people quit smoking. Resolutions are not as popular as a generation ago, but some of us need all the help we can get and New Year's still seems propitious for a fresh start.

For many of us, "all the help we can get" is not enough, and January is a month for recidivism too. Still, more people succeed on the

day they can discard the old calendar than on April Fool's. In economics—the nearest thing we have to a science of choice—both those facts invite attention. Why is it so hard for so many of us, on matters great and small—being kind to our families or to our fingernails, taking up exercise or giving up coffee, turning off the T.V. or settling down to write that article for *The Public Interest*—to do the things we already decided to do and to quit the things we decided to quit? And what is there about New Year's that offers support, even if not much? What are the other times and places and tactics and techniques that we use or avoid to keep our programs on track?

People also resolve, about that time of year, to lay money aside regularly for the following Christmas. Some people are poor at saving, and a sophisticated arrangement is offered by your neighborhood bank to help overcome the problem. It is called "Christmas saving." In this plan you are committed to weekly deposits until a date in November when all the money is there, with interest, to spend for Christmas. Sometimes it doesn't earn quite as much interest as regular savings. People accept lower interest because the bank protects these funds better than ordinary savings. Ordinary savings are protected against robbery, embezzlement, and insolvency; and insurance takes care of what protection cannot. But there is one predator against whom the bank is impotent—you. For a Christmas account the bank creates ceremonial barriers to protect your account from yourself.

Some people cheat on the withholding-tax forms they fill out for their employers. They *understate* their dependents. The IRS takes more than it deserves all year—a free loan from the taxpayer—and in return the taxpayer gets a reduced shock, possibly a refund, the following April.

Many of us have little tricks we play on ourselves to make us do the things we ought to do or to keep us from the things we have foresworn. We place the alarm clock across the room so we cannot turn it off without getting out of bed. We put things out of sight or out of reach for the moment of temptation. We surrender authority to a trustworthy friend who will police our calories or our cigarettes. People who are chronically late set their watches ahead in hopes of fooling themselves. I heard of a corporate dining room where lunch orders are telephoned in at 9:30; no food is served except what was ordered at that time, not long after breakfast, when food was least tempting and resolve at its highest. A grimmer example is people who have their jaws wired shut.

People behave sometimes as if they had two selves, one who

wants clean lungs and long life and another who adores tobacco, or one who wants a lean body and another who wants dessert, or one who yearns to improve himself by reading *The Public Interest* and another who would rather watch an old movie on television. The two are in continual contest for control.

As a boy I saw a movie about Admiral Byrd's Antarctic expedition and was impressed that as a boy he had gone outdoors in shirtsleeves to toughen himself against the cold. I resolved to go to bed at night with one blanket too few. That decision to go to bed minus one blanket was made by a warm boy. Another boy awoke cold in the night, too cold to retrieve the blanket, cursing the boy who had removed the blanket and resolving to restore it tomorrow. But the next bedtime it was the warm boy again, dreaming of Antarctica, who got to make the decision. And he always did it again.

How should we conceptualize this rational consumer whom all of us know and who some of us are, who in self-disgust grinds his cigarettes down the disposal swearing that this time he means never again to risk orphaning his children with lung cancer and is on the street three hours later looking for a store that's still open to buy cigarettes; who eats a high-calorie lunch knowing that he will regret it, does regret it, cannot understand how he lost control, resolves to compensate with a low-calorie dinner, eats a high-calorie dinner knowing he will regret it, and does regret it; who sits glued to the T.V. knowing that again tomorrow he'll wake early in a cold sweat unprepared for that morning meeting on which so much of his career depends; who spoils the trip to Disneyland by losing his temper when his children do what he knew they were going to do when he resolved not to lose his temper when they did it?

Does it matter, for theory or policy, whether we know how to characterize such behavior, even just to describe it in the language of preferences and values, choices and decisions, utility, welfare, and rationality? We could be interested in casting suspicion on the entire individualistic-utilitarian foundation of neoclassical economics by adding a large fraction of the literate adult population to that already large population disqualified by infancy, senility, or incompetence from being represented in our theory of the consumer. Alternatively, we could just be interested, as I am, in getting a better idea of what is going on and how much it matters when people behave in these apparently contradictory fashions. However we end up reconciling, if we do reconcile, these behaviors with the notion of a consumer's having reasonably stable values, knowing his val-

ues, and having the intellectual capacity to make choices that satisfy those values, there still seems to be for many among us a problem of self-management.

The non-self-governing consumer

A striking characteristic of textbooks in economics is that the consumer is a single person. So are owners of businesses. A couple of decades ago theorists began to recognize that a board of directors or an executive staff of a corporation, not being a single person, might not make decisions like a single person, especially not like a single person who either owned the whole business or owned only a few shares of stock. Only recently has the family made an appearance. People who deal with income taxes and family welfare have always had to think of families as multiperson units, but theorists who deal with "social choice" have typically used as their model the political system, or a board of directors, rarely that ubiquitous small society, the family. The family is an income-sharing unit, a consumption-sharing unit, and a welfare-sharing unit; that is, they live off the same income, share the same bathroom, and care about each other. No wonder theory neglects the family: It complicates things enormously.

But maybe it isn't only the family that, on a close look, fails to behave like a single-minded individual because it isn't one. Maybe the ordinary man or woman also doesn't behave like a single-minded individual because he or she isn't one. Lewis Thomas, author of *The Lives of a Cell* and more recently *The Medusa and the Snail*, enchants us with the idea that private functions of our bodies are performed by autonomous one-celled creatures that don't know they are part of us and might resent it if told they were. Carl Sagan, in *The Dragons of Eden*, hints that the two hemispheres of our brains reflect different evolutionary paths, giving us two ways of perceiving our little universes. I believe as I write this that I am awake but science fiction suggests that I have no way of determining whether I am asleep and dreaming. Schizophrenia, hypnosis, amnesia, narcosis, and anesthesia suggest that anything as complicated as the human brain, especially if designed with redundancy for good measure and most assuredly if not designed at all but arising out of a continuous process that began before we were reptiles, should be capable of representing more than one "person." In fact, it must occasionally wire in a bit of memory that doesn't belong or signal for a change in the body's hormonal chemistry that makes us, at

least momentarily, "somebody else." I am reminded of the tantalizing distinction that someone made when my wife had our first child after two hours on sodium pentathol: It doesn't make it hurt less, it just keeps you from remembering afterward. Strange that the prospect of pain can't scare me once I've seen that, when I become conscious, I won't remember!

So we shouldn't be surprised that people can act as if they were not quite singular individuals with unique identities and values and tastes and memories and sensory perceptions that display smooth continuity over time. Maybe for some purposes each of us is like two or more different identities, not switching discontinuously as in amnesia or electric-shock therapy, but with enough oscillation to affect some of those decisions that are neither binding long-term commitments nor shorter commitments so synchronized with the command cycle that the same self—that brave warm boy who dreamed of Antarctica—is always in charge.

Sometimes, but not always, it is easy to know which is Jekyll and which is Hyde. The person who drinks and becomes vicious, or a bore, and is morose about it for days afterwards; the person who continually resolves to demand that increase in pay and never musters the courage; and the person who walks into a casino for a little sociable gambling, loses more than he intended, commits more to recover it, and emerges traumatized after blowing his bankroll, all seem to present an unequal pair, a "straight" *ego* and a wayward *alter*. But even if that assessment is a fair one, it isn't so easy to judge the person whose loss of control leads to impulsive if regrettable generosity, giving his overcoat to a shivering wino or emptying his wallet into the Salvation Army bucket. The person who on doctor's orders is holding to 2,000 calories for the sake of his heart who goes on a midnight binge, stuffing his mouth as if his warden or his conscience might step in momentarily and stop him, seems to be somebody who needs a better grip on himself; but the people who out of vanity resolve to starve themselves in order to be movie thin, who from time to time decide the hell with it and have a good meal in good company, don't make it so easy to choose whose side we are on. Many of us have tried to help someone escape from a regime of austerity that we thought not only ill-founded but stifling in its consequences. And I still don't know whether, if those Antarctic dreams had come true, I'd have been better able to stand the cold and *both* boys would have been glad that the command structure gave the decision to the boy who, feeling no pain himself, could inflict it on the other.

“The spirit is willing but the flesh is weak.” That may be sufficient explanation for gluttony, some sexual incontinence, heroin addiction, or the scratching of hives. It doesn’t as readily cover television or gambling, procrastination or loss of temper, or the plain lack of motivation to get on with some self-improvement regime like rapid reading or better posture or spending more time with the children. It furthermore misses the important point that the willingness of the spirit and the weakness of the flesh—or is it the weakness of the spirit and the strength of the flesh?—frequently alternate rather than coincide, and that the willing spirit, like a loving parent (or like a punitive one), can try to isolate or immobilize that mischievous self that periodically takes charge. Furthermore, the “flesh” often seems endowed with as ingenious an intelligence and command system as the allegedly stronger “spirit,” in evading or overcoming the stratagems of the spirit. And maybe, memories of pain and discomfort being of notoriously low fidelity, the “willingness” of the spirit to resolve on some arduous program is only a sign that it’s easy to be brave when the danger is remote.

One model suggested for this ambivalence in choice would let the two selves—or the several—differ along a single dimension amenable to economic analysis. That is the dimension of time preference—of the discount rate to compare present with future, near future with far future, imminent with remote, or permanent with transient. The idea is that the person who takes that drink or lights that cigarette or digs into that Boston cream pie is merely discounting the future with a high interest rate. Resolving in late December to begin running three miles before every breakfast in January is a future-oriented decision, especially if the benefits are reduced mortality two or three decades from now. The same is true with reducing weight. The person who then fails to get up some January morning to do that stint before breakfast, or who eats and drinks 3,500 calories at a party on January 10, has merely shifted gears in his discount system, undervaluing that second decade compared with tonight or this morning.

In a study of discounting that may be a good way to treat the person who lives, as they say, “like there was no tomorrow.” It’s the way we say, in an economics textbook, that you can always grow bananas in a submarine: The price would simply be so high that you may as well call it infinite. But the person who is simply not thinking of the future, who shuts his eyes to avoid it (especially when the future is not a decade away but tomorrow, when he knows he’ll suffer remorse and disgust and the disapproval of fa-

mily and friends who witness the collapse of resolve), like the person who furiously scratches his hives, would have to be someone whose time discount is 100 percent per hour or per minute, compounding to an annual rate too large for my calculator. It isn't clear whether the straight fellow who resolves to run three miles before breakfast enjoys such a far horizon that he can appreciate the benefits of elderly good health, or merely has such a short memory that he forgets how disagreeable it's going to be, every morning in perpetuity, to spend 30 minutes gasping for breath.

The art of self-management

The name "economics" comes through the Latin *oeconomia* from the Greek *oikonomia*, meaning household management (*oikos*, house, and *nomos*, managing) and still has some of that meaning in its variant, "economical." My suggestion is to recognize a comparable art or science of "self-management," possibly as part of economics—or possibly not, but related. Maybe we could attach the Latin *ego* to the Greek *nomos*, and make *egonomics*. What scope such a discipline would have I don't know. I am interested only in the part that might be called *strategic egonomics*, consciously coping with one's own behavior, especially one's conscious behavior. As a motto, David Hemenway has suggested, "No Thyself!"

My suggestion is that we get help from comparing self-management with the way one tries to manage another, another who is in a special relation to one's self. Many of the skills and maxims and stratagems for coping with one's own behavior become less mystifying and more familiar if we can recognize them as the same principles and stratagems that apply to managing someone else—someone in a close relation, with a paternalist or senior-junior quality like that between parent and child, teacher and pupil, missionary and convert, master and apprentice, or guide and follower.

I don't intend anything mysterious or philosophically profound in this notion that some intriguing parts of strategic self-management are like coping with one's own behavior as though it were another's. To emphasize that I am dealing with mundane issues, familiar to us all, with no deep meanings intended and no necessary intention of questioning what the "self" is or offering an answer, let me begin with some cases remote from smoking, drinking, eating, gambling, jogging, and procrastinating, in which the question what one "really" wants doesn't intrude. What do you do with a child that scratches in its sleep?

Usually scratching is thought to be dysfunctional. Whether it is hives, chicken pox, mosquito bites, or poison ivy, doctors worry about infection; and most of us, especially parents, have observed that any momentary frenzied relief from scratching is followed almost instantly by enhanced itching. Many of us learn to resist the temptation to scratch. But not in our sleep.

Mittens are an answer. (Closely-trimmed nails are another.) Suppose it's not a child but your adult self: You are as likely to scratch as that kid, once you're asleep. I suggest mittens. If you don't think of it yourself your doctor will; it beats having somebody tie your hands to the bedpost. (Even that's better than scratching if you haven't any mittens.) There doesn't seem to be much difference between tying mittens on a child's hands to make scratching innocuous and tying mittens on your own with the same intention. Either way there is "somebody" who in his sleep will lack the discipline or the awareness to do what "he" might have wished to do, namely to abstain from scratching. Treating your sometime self as though it were somebody else is a ubiquitous and familiar technique of self-management.

Where else do we find it unexceptionable? There's an endless list of occasions, some important, and once I start the list any reader can extend it. These are cases in which there is a genuine problem of managing one's own behavior, and in which the control process is such that the "manager" is not always in charge, especially not when management becomes a problem. And in such cases the ways that one attempts to cope, while in charge, with the problems that will arise when that other self is in charge (or when no one is in charge) are like—not identical with, but like—the ways one would manage another.

My interest is focused at the more conscious strategic end of the spectrum, where all but the most doctrinaire would describe behavior as voluntary and conscious. Usually, though not always, lighting a cigarette can be characterized as voluntary and conscious, or accepting a first drink, or ordering dessert, or buying an expensive piece of jewelry to please a salesperson, or agreeing to perform an onerous task when it keeps one from facing another that is more fearsome and more urgent. It is not quite so evident that flying into a rage is "voluntary" and "conscious." Or biting fingernails or slouching into an unattractive and unhealthful posture. Or turning off the alarm half asleep and failing to get out of bed. Or slamming on the brakes when the car skids on snow and braking is exactly the wrong thing and you know it. Averting one's gaze under interroga-

tion may be conscious and voluntary, blushing perhaps not, and the electrical conductivity of the skin of one's palm may be impossible to control without training. My idea is that in the detached way that we can approach management problems near the unconscious or involuntary end of the scale, including some of those that involve physical and mechanical props as well as environmental manipulation, we can more casually approach those behaviors that are indubitably "voluntary," substantially conscious, and more than trivial.

Sleep has already been mentioned in some connections and there are more. I mentioned scratching in sleep; there is removing bandages, suffocating an infant, rolling off a ledge, snoring, talking (either noise or information), and, though it has gone out of vogue in the last 40 years, sleepwalking. In some circumstances resisting interrogation is important while asleep. Then there is awakening—both hearing the alarm (or the baby's voice, or the intruder's foot-fall) and overcoming those sometimes overwhelming forces when the alarm goes off. And staying awake: Sentries have been shot, truckers burned, watchmen bypassed, babies neglected, and tasks unfinished when people—voluntarily? consciously?—let their lids droop or fell asleep with their eyes open or even lapsed only a few seconds from full awareness.

Panic is another. Public doors now have panic bars to open them; horses are blindfolded to be led out of a burning barn. Alcohol and other tranquilizers are regularly used to induce bravery on the battlefield and calm among airline passengers. Carl Sagan even proposes that sleep can insulate an organism from that awareness of danger that might cause it to panic and reveal itself, or to breathe harder and emit more telltale carbon dioxide.

For stagefright, I know people who use tranquilizers, both those sold at the drugstore and those served before dinner. Albert Edward Wiggam wrote *The Marks of an Educated Man*, which I read as a boy when I was trying to improve myself. He'd been inspired by William Jennings Bryan and wanted to be an orator as badly as I wanted to explore Antarctica. But when he faced an audience he blacked out. It lasted only a minute, but not many audiences would wait a minute. Wiggam memorized a story to begin every speech with, memorized it so well he could tell it in his sleep or while engaged at other things, and, he hoped, during the blackout that would occur as he walked on stage. He knew his career was secure at that glorious moment when, recovering consciousness while standing before an audience, he heard himself finishing the story just in time to enjoy the laughter that he had earned with such effort.

What about vertigo? Although it won't work if you have to drive a mountain road, shutting your eyes helps. If I have to carry you piggyback over a chasm, I may blindfold you; if I don't think of it, you may tie your own blindfold. Odysseus' sailors could just as well have put the wax in their own ears.

Absent-mindedness is a funny one. Whether you tie that string on somebody else's finger or on your own, you do it for the same reason and with the same expectation. All of us have been at meetings where someone's wrist alarm or pocket beeper went off. Most people run out of gas while surrounded by service stations.

Anger is a condition in which we may on impulse do the wrong thing. "Count to ten" is a principle that can be applied in many ways, to oneself as well as to others. And a multitude of phobias invite management efforts to overcome some powerful immediate inhibition—diving off the high board for the first time, or getting fluid syringed out of one's knee with a four-inch needle.

Some of these problems of self-management are joint among two or more people. Consider giggling. If somebody sneezes at a lecture I'll exclude the sneeze from the "behavior" we're talking about, and if two people talk to each other I'll consider it bad manners rather than bad management; but if two children giggle every time they catch each other's eyes it can become painfully hysterical, beyond control once it starts. Not looking at each other helps, not sitting where they can see each other helps more, not going to the same event is still better. When I watched "The Death of Chuckles the Clown" on *The Mary Tyler Moore Show* with a group gathered to study a sample of programs, the 20-minute spasm of uncontrollable giggling spread to many of us viewing it. I'm sure I'd have kept my decorum if I'd seen it in private.

Stark cases

Science fiction can clarify principles by inventing stark cases. I propose two. The first involves pain. A person is to be subjected to intense pain that will last five minutes no matter what he does, and 25 more if he does nothing to stop it. He can stop it after the first five by banging his fist on a button. If he hits the button and stops the pain before 30 minutes are up, the process will be repeated the next day, and the next, forever until he endures 30 consecutive minutes. Any day he lets the pain go on for 30 minutes it will end; it's over forever and he's released. The pain is to be as severe as it can be without making him incapable of hitting the button or un-

mindful of the button, and if necessary he'll be trained to hit the button when he wants to stop the pain.

I offer three observations. First, there may well be people, possibly most of us, "shortsighted" you may call us (or "high discount"), who cannot endure the extra 25 minutes without hitting the button—ever.

Second, if I were the victim and you were my friend and you had an opportunity not to disconnect the pain but to disconnect the button, so that I could pound my fist for 30 minutes and never stop the pain, you would disconnect the button. And afterwards I would thank you.

Third, if at any time during the interval I can disconnect that button myself, condemning myself to the full 30 minutes of pain, I expect that I would do so. I hope that I would. And only my worst enemy would reconnect it in time to insure the next pain session.

My second example is less artificial. It is deciding in advance on the circumstances in which one might wish to be dead though in danger of going on living. It is particularly poignant if carrying out the decision will require the help of someone whom I may then beseech to disregard what I earlier decided. I ask you in advance to see that I die if certain conditions befall me and to disregard any change of mind that the fear of imminent death may induce; if I become terrified of dying you must not prolong my terror. We confront that question, which is the authentic "I"? There are two of me, one who was in command when I made the arrangements, gave the instructions, and warned you not to heed that other one who might surface and speak with my voice when it was time to die. How do we tell—how do you tell—whether this is the moment of truth or the moment of derangement?

This is the problem of authenticity that arises when someone addicted to alcohol, drugs, or cigarettes, or a compulsive overeater, asks you under no circumstances to heed a plea for a smoke or a drink or a dose or another helping, even if he pleads with tears. Indeed, the more frantically he pleads the more you may be enjoined to recognize what a horror you perpetuate, while momentarily relieving it, if you accede.

Even if at that time I still want to die I may need help. (I do not believe it possible to hold your breath and die; the urge to breathe overcomes the urge to die, however much you regret it once you've caught your breath.) So I propose this piece of technology. A specific contingency in which many people wish they would die is a massively disabling stroke, a stroke that leaves one bedridden, in-

articulate, incapable of recognizing faces. Some of us may wish to die because of the horror or indignity, some to remove a penalty that no one would wish to inflict on the family. Suppose there were a diagnostic contrivance that could be implanted in the brain that, in the event of cerebral hemorrhage, would measure the severity, remaining inactive if the predicted paralysis were less than some limiting value but aggravating fatally any condition above that limit. With the device implanted I needn't lift my hand to take my own life. You needn't help me, nor need you try to stop me. My doctor can't save me and needn't try. It is prearranged and automatic.

My conjecture is that the device would be attractive to many of us. Further, that it would be less attractive if it were designed so that it could be, and had to be, activated in the event by the victim.

Management skills or moral fiber

The situations I discussed, including the artificial ones, are background. They are to remind us that there is nothing strange or unfamiliar, let alone mysterious and inexplicable, about people regarding themselves as problems of discipline, control, or motivation and taking measures: to insulate themselves against stimuli, to disable themselves with respect to actions, to change the rewards and penalties that attach to behaviors, to submit to the control of others and to surrender the power to decide for themselves on occasions when, their internal mechanisms having changed or become susceptible to alteration, they would make a decision that now they deprecate. If people can drink alcohol now to be braver in an hour, without straining our credulity that somebody could wish to alter his own perception of what is at stake in a decision he has to make shortly, declining a drink now the better to appreciate what is at stake when he decides in an hour on the chocolate mousse or the cigarette that follows, needn't puzzle us either. It isn't much different from declining to offer a drink to a friend who is trying to quit smoking, when a little alcohol in the blood tends to shift his preferences toward nicotine and away from longevity. Leaving one's money at home in case of thieves on the road, or creditors, or friends in need of loans, is not altogether different, judged as plain financial management, from leaving it at home for fear of the temptation to spend it.

The advantage of looking at self-management in this light is a simple one. There are many tactics and techniques employed successfully or unsuccessfully to influence and constrain the behavior

of others. We have some familiarity with them, in diverse areas ranging from child discipline to military discipline, school discipline and religious discipline, athletic training and the care of institutionalized patients, the managing of parolees and, somewhat vicariously through books and movies, the preparation of espionage agents who, for example, can't blurt out under painful interrogation the names of people whose names they do not know or cannot write a recognizable signature if they can arrange to crush a hand in a doorjam.

What I'm talking about is different from what is usually thought of as self-control or self-discipline. I am not talking about the development of inner strength, character, or moral fiber, or the change in values that goes with religious conversion. Nor am I talking about education in the consequences of behavior—lung and heart disease from smoking, spoiled careers and families and livers from alcohol, higher mortality from abandonment of a medicinal regime for hypertension, or the self-aggravation of habits like card playing or television.

Some distinguishing characteristics

It is one thing to appreciate the general idea of tactics deployed to protect oneself from oneself, and the ubiquitousness of the problem. It is something quite different to focus on a specific problem, and to do so not to illuminate a general principle but to cope with the mischief at hand. For that we need a systematic way of analyzing the habit or weakness along relevant dimensions: the vulnerabilities of its victim, the environment in which it occurs, and the information, communication, and institutional commitments that can be brought to bear.

I do not know any taxonomy or analytical scheme for finding the similarities and highlighting the differences among the different habits or addictions and the targets they afflict. I can only illustrate the kinds of analytical dimensions I have in mind.

One relates to the timing or "time profile" of the habit or addiction. We can distinguish the afflictions, temptations, or habits that 1) occur at random, unpredictably, providing no free time or "time out" but which are not continuously present; 2) occur cyclically, on a schedule that is physiological or that reflects the daily or weekly pattern of living, or on some cycle autonomous to the habit itself, a cycle of onset and exhaustion and recovery; or 3) are continuous, ever-present, neither waning and waxing nor coming by surprise.

Another temporal dimension is the "time to indulgence," or "onset

time." This is ambiguous and yields only an order of magnitude. It is the time from the moment of suggestion or temptation, or of yielding or decision, to the act that constitutes the offending event. It is how much time intervenes during which succumbing can be impeded or the victim dissuaded or a warning sounded or help mustered or some mode of rescue mobilized. For smoking, the time is seconds or minutes, according to where the nearest cigarette is; for alcohol it is minutes to hours, according to whether one is at home or on the street, at work or on the tennis court, alone or with somebody, the time of day, and whether alcohol is handy. Scratching takes seconds; eating takes minutes or hours, again as with alcohol depending on whether one is driving on the freeway or sitting in his own kitchen. If only another piece of toast is at issue the time is in seconds.

Here is where abstaining and persevering are qualitatively different. A person can often quit exercising promptly—unless he is hiking a mountainside or rowing far from shore—but it may be possible to resume if you quit. Determined to run a couple of miles you can quit at a mile and a half, but after a few minutes get back on course, possibly doing a little extra for good measure with no irretrievable loss. Unsmoking a cigarette is harder.

Still another measure is "warning time." If there are early symptoms, harbingers of the motivational onset, or signals that precede the stimuli, there may be a period in which protective measures are still available, either to the victim or to others concerned.

There are physical characteristics by which to classify some substances or compulsive behaviors. Weight and bulk, portability and privacy are significant. It is easier to carry cigarettes than a coffee pot. Pipe and tobacco are more easily carried in a sport jacket than a tuxedo. People whose addictions require pool halls or swimming pools, slot machines or record players, television sets, chess boards, card tables, or a bed or bench are not as continuously and universally free to indulge their habits as the people who have their tics and fingernails and eczema always with them.

Money is important. Heroin is "artificially" costly on account of denial; anyone addicted to the best Beluga caviar or the rarest of perfumes has a different problem than someone addicted to chocolate. Indeed if cigarettes cost as much as Havana cigars, there would be little concern about smoking.

Visibility or detectability is important for habits whose indulgence is illicit or disapproved. A couple that cannot resist squabbling may wisely stay among company; lunching where no liquor

is served avoids the risk that one can be cajoled into a first drink and thereby lubricated into a second. There is an interaction between legal or social status and visibility or detectability.

Another way to classify a habit or addiction is by the "damage function." Is the risk or damage a cumulative total, or geared to current activity? With smoking, the cumulative total determines lung cancer, and probably current absorption determines the monoxide damage. Behavioral dangers from alcohol—driving, fighting, and abusing children—are certainly current, while damage to liver, stomach, or throat is cumulative. Cumulative damage can be continuous and linear, or there can be some threshold below which the habit is harmless or a plateau beyond which all the harm is done. (This is the same issue that arises with risks of cancer from nuclear radiation or coal-burning emissions.)

With both current and cumulative damage there is the "decay rate." If a smoker quits at 50 does the risk of cancer or heart disease diminish, relative to what it would have been with continued smoking, or is the damage irreversible? If it declines, does it diminish promptly or slowly, toward zero or some compromise level, and linearly, exponentially, or with what shape over time? Evidently calories, cholesterol, and tobacco are strikingly different in these respects: the distinction between cumulative and current shifts on a time scale of hours, minutes, weeks, or years. Momentary drunkenness is "current" in days but "cumulative" in quarter hours: The decay rate of blood alcohol, and the tendency of alcohol to be neither imbibed nor assimilated instantaneously but over some fractions of hours, makes the process current or cumulative according to our time perspective. Calories and weight are cumulative in the laws of thermodynamics and the time perspective of people gaining or losing; but a professional athlete who trains six months out of the year and relaxes the other six may think of abstinence and minimum weight as concurrent rather than cumulative.

Still another dimension is whether the habit is autonomous or self-aggravating. Is there "feedback" between indulgence and the ensuing intensity of the affliction? By most reports the withdrawal symptoms of tobacco, especially the craving, diminish but not always immediately, with a "half life" measured in days for some and weeks or months for others, diminishing to zero for some but remaining above for others. An associated question is the speed with which the habit is reconstructed if the behavior is resumed. Some smokers, but not all, appear to revert virtually to where they were before they quit. It is never reported that a veteran smoker who

quits and takes it up again smokes like a novice. So we distinguish, for those who quit some habit, the time scale on which withdrawal symptoms disappear and the (different) scale on which all effects disappear permanently—if they ever do. The controversies over “controlled drinking” for former alcoholics involve these different diagnostic time scales.

Another dimension is consciousness. This, too, is ambiguous. Nobody who smokes is unconscious that he smokes, but smokers do light cigarettes “unconsciously” and “awake” to wonder when they lit them or where they found the matches. But unlike the skin affliction that one can scratch unconsciously any time, cigarettes can at least be left behind or unpurchased so that one is unlikely to smoke unconsciously during a non-smoking campaign. Daydreaming is a debilitating habit for some people, and usually by its nature unconscious. So with posture, speech habits, and a multitude of cosmetic and other mannerisms that can be unconscious simply because they are always and everywhere on instant call. We need terminology to distinguish the person who is consciously losing his temper but unconscious that that is what he is doing. The person who, losing control, is accused of losing it, of overreacting to the occasion, and who answers that his behavior is precisely in accordance with what the situation demands—scolding the child or the waiter or the other driver, raising his voice, losing his temper, fighting the appliance he is trying to repair, or driving with too much abandon—might be said to be “conscious” of his behavior but not conscious of an incongruity of his behavior with its occasion.

The size of the problem

If we think of our subject as part of or akin to economics, we ought, as economists do, to ask whether the problems here are big ones or little ones and how to measure their magnitude. Is it a trivial matter of two or three minutes wasted reading the comics, or of cuticle picking and hair twirling and other compulsive “grooming” that represent minor cosmetic ailments or major discomforts, but rank well below arthritis as a scourge? Or is it a substantial problem of health or productivity?

We can try smoking for size. The serious consequences of smoking are fatalities due to heart and lung disease. Estimating the social cost of early death due to smoking usually leads to the result that the costs are large and fall on the smokers, or on the smokers and those who care about them. But they don't inflict a lot of cost on

their fellow citizens, since the incidence of chronic, expensive illness among them—whether paid for publicly through Medicare and Medicaid or shared quasi-publicly through Blue Cross—is fairly low. There's nothing quite like a heart attack for wiping people off the Blue Cross and Medicaid rolls just before they begin to enter the expensive age; it tends also to knock them off just about when they've made most of their contributions to social security, but haven't collected much. They die when their children are grown, and don't leave families on welfare. And there's not much to do for lung cancer except ease the pain; it, too, hits at an age, at least historically among its male victims, that pretty nearly minimizes the costs or even maximizes the financial benefits to the rest of the population. So to appreciate the nature and magnitude of the problem that tobacco presents we should measure it for the people who smoke. (Some who do not smoke suffer from the carbon monoxide of those who do, and a few will be burned by hotel fires when a smoker falls asleep, but these do not add to enough to make smoking mainly a problem of "external damages.")

Surveys in America and in England indicate that most people who smoke—not everybody, but a majority—have tried to stop. The Surgeon General has been warning people for two decades that smoking is bad. Just about everybody knows it. If there were some way that cigarettes could be reliably put beyond reach, and people could vote on whether they would like that done, my guess is that a majority of smokers would elect to deny themselves the possibility of lighting another cigarette. How much might they pay for the opportunity?

Hardly anybody thinks it could be done, and neither alcohol in the 1920's nor marijuana in the 1960's makes the effort look promising. Those who didn't want the ban would offer a market for contraband cigarettes; nobody has an idea how to suppress such a market; and if the market is there the smokers who favored the ban will be little more able to resist cigarettes than they used to be. Even if the abolition were unanimously approved, people would know that if they could sneak in a few cigarettes people would buy them; there would be a black market, and people who wished the market didn't exist would patronize it.

But suppose there were a reliable way to quit cigarettes—to quit even wanting them—without torment or suspense or loss of privacy or any restrictions on mobility or any physical side effects. What would it be worth to those 50 million smokers out there, and to some of those 30 million former smokers who may need help to keep from

backsliding? Let's postulate an immediate market of 30 million customers for this painless and reliable way to stop smoking or, having stopped, never to return. If the people who wanted to quit smoked as much as those who wished to continue, these 30 million would-be quitters would spend about \$10 billion per year on cigarettes. If smokers expect—in the absence of relief—to smoke another 15 or 20 years, and if they discount future savings at a “real” rate of interest (after adjustment for inflation) somewhere from 4 to 10 percent per year, and if at a minimum they would value relief from smoking the way they would value the fuel-oil savings from warmer weather, we can put a minimum valuation somewhere around \$100 billion. “Minimum” means only the saved *expenditures*.

We can only guess what people would pay to be relieved of the nonfinancial costs associated with smoking—the cleaner teeth and cleaner ashtrays and freedom from a “habit,” and especially better health and longer lives—and what people would pay to help spouses, children, parents, and friends to be rid of a deplorable and dangerous addiction. We don't know, because they don't know. (Some of “us” are “them” and we still don't know.)

An alternative question is how much smokers would pay for something that, with little impairment of their smoking pleasure, would make the habit safe and so certified by that Surgeon General who otherwise tells us that smoking is dangerous.

My conjecture, which you may compare with your own, is that the worth of being free of smoking, or free of the consequences, is far greater than the financial savings on cigarette purchases. If that is so, the benefit from a suspense-free, torment-free, *reliable* method of quitting, discounted to the present for three fifths of today's American smoking population, would be a sizable fraction of a trillion dollars. This is only the worth to people who already smoke and excludes our children who, not yet smoking or not yet wishing to quit, might be customers for that reliable self-management regime in another 15 or 20 years.

I am not thinking of what the market would bear if I could monopolize a nicotine chewing gum that eliminated the need to smoke, merely trying to get some sense of whether there is a consumer problem here of real magnitude.

Smoking is only one of several addictive or habitual behaviors that people engage in, but it is the best example of one that is widespread, meets no known physical need (except for people who have already acquired the habit), is known to be harmful but only in the statistical long-run, is hard to quit, and that most people might like

to quit, especially if they could be relieved of withdrawal discomforts, *but very likely might like to quit even if they had to suffer withdrawal if only they could be assured of success.*

Going through a little more conjectural arithmetic I find it easy to arrive at the conclusion that these problems of consumer self-management can easily be on the order of a trillion dollars (lump-sum, discounted value) for the current population of consumers. But it doesn't matter whether you come out with one-third of a trillion or three trillion. On an annual basis, again just for the purpose of suggesting order of magnitude, it is more like a \$100 billion per year than \$10 billion.

What does that make it as big as? These days one is tempted to say it's about the size of the energy problem, but that is a comparison only in gross magnitude and we don't need it if we've already got the magnitude. I propose that people concerned about consumer ignorance, about the inability of consumers to budget, the inability of shoppers, especially poor people, to spend money wisely, and about the consequences of misleading advertising—including the advertising that convinces people they feel bad or smell bad and need something that comes out of a spray can or a medicine bottle—all together add up to no more than the inadequacies of consumer self-management. In other words, if people could reliably do, or abstain from, the things that in their serious mode they resolved to do and to abstain from (or would resolve if they didn't give it up as hopeless), it would make as much difference in the aggregate as if all those other familiar problems of consumer ignorance and budget management could be dissolved away. (I am excluding from the comparison the deeper issues of consumer satisfaction raised by Tibor Scitovsky in *The Joyless Economy* and by some sociologists about the origin of tastes.)

Some tactics of control

Let's go back to that New Year's resolution. What is its appeal? Why does it sometimes work?

There is evidently some "investment" in a New Year's inauguration. Since the days of the Druids the mid-winter solstice has been a time of new beginnings, not an occasion to be wasted. Fail this time around and you lose a year. Deciding earlier and waiting for the day the leaf is turned affords some psychological preparation. If there is any way that a person can persuade himself that he really means it this time, a birthday or a new year or the first day on

a new job offers a discontinuity, a break with the past. There may even be a little magic about it. Doing it New Year's, even writing it with lipstick on the bathroom mirror or carrying the printed resolution strapped to a wrist, one impresses oneself with the seriousness. It raises the stakes. More is threatened by failure than just the substance of the resolution: One's personal constitution is violated, confidence demoralized, and the whole year spoilt. At least one can try to make it so.

The mechanism is more obvious when one announces to family or carpool the renunciation of alcohol, tobacco, or potato chips—especially when several weeks are devoted to preparing everyone for the starting date. Shame is a deterrent.

Ideally, there might be legal arrangements. One goes to the town clerk and swears out a resolution, paying the cost of publication, posting a reward for evidence leading to one's own conviction for violating the terms of the oath just sworn. I suppose it would be unenforceable, there being neither damages nor a valid contract. But one might authorize "citizen's arrest"—a "Good Samaritan" immunity—inviting the use of all necessary force to keep the pledged party from cleaning out the dish of peanuts, with the prospect of a reward being volunteered in later gratitude. If the courts are closed at the times of day that one self might then sue for release from the involuntary bondage to which the other self has committed him, he successfully makes himself an outlaw for bounty hunters with respect to the particular transgression he fore-swears. And who can protect his rights if, forcibly prevented at midnight from violating his pledge, he is satisfied next morning with his involuntary salvation (like that boy who sent me to bed without a blanket) and turns down the importunate civil-liberties lawyer.

New Year's is also an answer to the question, "When?" The question is especially in need of a firm answer when the correct answer is "already." It is comparatively easy, any old Thursday that one planned to begin getting up an hour early, to perceive clearly when the alarm rings that the weekend is a better time to initiate such things.

Walter Lippmann's "plate glass window" that deters the sidewalk thief—and characterized American troops in post-war Europe—is a useful principle for self-management. Clearly marked lines, unambiguous rules, straightforward principles that cannot be made ambiguous by even the most inspired casuistry, are the stuff with which "salami tactics" are rebuffed. Just as it may be easier to ban

nuclear weapons from the battlefield *in toto* than through carefully graduated specifications on their use, zero is a more enforceable limit on cigarettes or chewing gum than some flexible quantitative ration. (There was a time when I allowed myself tobacco only after the "evening meal." It worked well but led to tortured reasoning Thanksgiving afternoon, or flying west across the Atlantic with perpetual afternoon, and it stimulated lots of token sandwiches on leaving the ski slopes to drive home.)

"Precautionary rules" can be effective. Many annoying and unsightly small habits, involving face and fingers, are associated with "precursor" explorations, touchings and fingerings that are resistible themselves but lead unawares to irresistible sequels. The victim is often unaware of the relation between innocuous, non-compulsive behavior, and the trap that it leads to. People who wish to quit smoking sometimes discover that, at the outset anyhow, it helps to give up alcohol too, it being easier to rationalize the after-dinner cigarette when one's thoughts have been clarified by a few glasses of wine. And those wonderful folks who brought us potato chips are so sure of themselves that they dare us on television to eat one and stop. Just as children are best kept away from the water if you don't want them to swim, and infants best taught never to open the cupboard where soaps and poisons are kept, avoiding the cue or stimulus or trigger is important in drug therapy and dietary regimes and in the treatment of gambling fever. I have often wished that for a small addition to my bill the hotel would disable the television in my room during my occupancy.

There is one family of tactics common in interpersonal relations that is peculiarly unavailable, or nearly so, in dealing with oneself. That is deceit. One can indeed throw a key into the darkness where it cannot be found until morning, putting the locked cabinet or the car's ignition beyond reach, but it is hard to hide something and forget where it was hidden, especially when it has to be available for finding at some legitimate time.

It is also hard to motivate abstention by tricking oneself to believe that the risks have become truly prohibitive. It is reported by drug therapists to be a source of relief and reduced discomfort to an addict just to know, once the acute stage of withdrawal is past, that there simply is nothing available. Doctors report that when patients are flatly told that their condition makes it imperative they cease smoking at once, the patients quit not only more reliably than when they are left any choice, but far more comfortably. Continual indecision, or continual deciding or resisting temptation, ag-

gravates both the discomfort and the temptation; and anyone who wishes to quit should wish to be told with finality that, though he is healthy in other respects, his next cigarette will kill him. Although his doctor could deceive him—probably won't, but could—he cannot deceive himself, and probably cannot credulously instruct his doctor to deceive him.

Parole systems offer an interesting model. So do the modern technologies for medical monitoring, including the more fictional devices that ring a remote alarm or release a stupefying drug or electric current upon some kind of arousal in the monitored patient. The parolee who must show up once a day, or phone in every three hours, or stay in somebody's custody on pain of that person's being treated as an accomplice, may be physically able to escape surveillance but deterred by the certainty of apprehension. Whenever the foresworn activity is inherently visible, arranging for no escape from public places may be a sufficient way to incapacitate oneself.

For positive performance there are other tactics, some quite opposite to those for abstention. For example, breaking a large task, such as a Ph.D. thesis, into small pieces to make the goals more proximate and the magnitudes less intimidating, even setting time limits rather than piecemeal goals, works for some people. Kafka's "Great Wall of China" required motivating people toward a task that could not be completed in their lifetimes; learning a new language, or a new athletic game, eventually entails a long hike on a seemingly infinite plateau. Round-number targets help motivate the joggers; and if there is no unique distance between two miles and five to offer an intermediate goal some runners joyfully discover the metric system with its handy five-kilometer distance. Even the weakness that takes the form of discounting the future—actually, more like averting one's gaze from the future—can be turned to account: Medium-distance deadlines look so unthreatening that people welcome them, even plead for them, knowing that without them "today never comes" and the promised task will never be done, perhaps never started.

I have come across an interesting case in which three "people" seem to be involved—three of me or three of you. It is the offering of modest rewards or punishments, and it goes like this: The person tells himself that he may sleep late and skip the exercise regime whenever he wishes but only on condition that he forego lunch, or a favorite program, or a weekend skiing; alternatively he promises himself that every day that he gets up early he can

watch five innings of baseball on the tube. Now, this scheme works only on two conditions. First, that the reward or punishment be potent enough to induce the desired behavior; and second, that the "somebody" who wants to turn off his alarm with his eyes closed will believe that another "somebody" will later have the fortitude to administer the punishment or deny the reward, when "they" are really all the same person. People told me it worked; I tried it and found that it could. If A lacks the fortitude to get out of bed, B has the fortitude to do without baseball because C laid down the law at an earlier time. If I cannot directly make myself get up at the alarm, I can nevertheless make myself inflict some worse privation later, contemplating which I get up with the alarm! It sounds like something a decision theorist would describe as "intransitive."

Something similar is involved in a mandatory delay system. Imagine that monitoring device that will inflict pain the moment it detects nicotine in my blood, but that I can disable on three hours' notice. Desperate for a cigarette I throw the switch so that in three hours I can safely smoke. Any time within the three hours I may suffer a resurgence of resolve and reset the mechanism, setting the timer back to three hours. If I can never go three hours without losing control to that tyrant who wants me to quit, he'll get his innings and when he does he'll turn the timer back. But it works on the honor system too. There are people who can wait, but not forever; they allow themselves to smoke (or eat or drink or some other indulgence) whenever they wish *with a specified delay*. In a moment of truth, realizing they should never have taken such an ill-conceived oath, they declare their abstinence at an end and have only to wait then the specified number of hours to be free. Just knowing that they are never more than three hours from a cigarette helps them avoid panic; they rarely invoke the escape clause, though, and when they do they almost always—before the waiting period is up—withdraw the notice they filed.

That comes close to deception. The patient might not submit to the discipline of waiting three hours if he knew that his petition would be challenged and withdrawn before the three hours were up—indeed that that was the whole purpose of the scheme. Somehow it works, at least occasionally. How to describe the collusion is beyond me. I have spoken to distance runners who, as exhaustion approaches, pick their stopping places a mile in advance with the rule that any place more distant can be picked at any time before they reach the current target, and once picked even

by the most fleeting resolve it becomes controlling. I think I know whose side I'm on, and I'm sorry for him.

One of the central dilemmas of self-management is epitomized by titles like *You Can Stop*. You can, perhaps, if you believe you can, and the title, *Maybe You Can Stop—You'll Never Know Until You Try*, is an invitation to failure. Raising the stakes in the game, by investing one's self-respect in a campaign that is sure to try one's steadfastness, is a risky business. Failing in January is worse than failing in April if the New Year's launching was billed in advance as the ultimate test of one's worthiness. Once a threat of reprisal fails to induce the desired behavior and the punishment has to be inflicted, one can only regret the whole attempt. That is particularly true in coercing oneself, when both parties share the same values and feel the same remorse.

Furthermore, the suspense seems to be the worst of it. Continually resisting temptation, watching oneself anxiously, talking oneself to the brink of rebellion and painfully getting a grip, allegedly is itself what eventually becomes unendurable—the anxiety, not the withdrawal, or the anxiety and not the pain of continuing on course or up the mountain. Failure takes the form of a desperate dash to freedom. Not freedom from the pain of continuing, or from the hunger and privation, but freedom from suspense, freedom from indecision—or, better, from perpetual unfinished decision, freedom from intense and unremitting self-regard and responsibility. And in a few cases, such as becoming intoxicated, one escapes the ordeal and the remorse as well.

Ben Hur didn't have to make himself keep rowing. The man with the whip took care of that. Some people who run for exercise discover that the fear of quitting—not the fear of running painfully, but of quitting—becomes so severe that they are tempted to quit to get rid of the fear. Once they've run the course the mental agony is gone and the physical agony bearable; so they treat themselves at the end to a little extra when, anxiety gone and nothing at stake, they can at last run for the fun of it.

Building confidence is part of many regimes. Break a few easy habits before going on to the hard ones; quit a few to convince yourself you can; talk to people who succeeded, not who failed, and "psych yourself" into believing you'll inevitably do it. At least, that's the advice you get from those who want you to try, including those who will help you for money. It apparently enhances the likelihood of success. (Whether it makes failure more catastrophic, we're usually not told.)

The empirical science of self-management is not much further developed than the theoretical egonomics. Still, there are grounds for optimism. Since the Surgeon General's findings were first made public, the number of cigarettes per capita stopped increasing and has decreased slightly. The tar content has declined markedly. In my own census group, males 45-65, the proportion that smokes is declining 4 percent per year, or one-third per decade, and among males that age who read this journal—among males who wear neckties—the residue of smokers is diminishing with a half-life of a decade. (Not dying, just giving it up!) Old hotel employees remember when after an all-day professional meeting they emptied the ashtrays into wastebaskets; now they empty them into an ash-tray.

The news is bad about some other population groups, and I am not being cheerful about epidemiological trends. But 30 million people did quit. We have no good information on how many times they quit, or even how many of them just hadn't had a cigarette for a whole day when the interviewer rang the bell. But there's a lot of information out there on our subject.

Meanwhile, I fell off the wagon in mid-January, but climbed back aboard on Ground Hog Day. With any luck the manuscript will reach *The Public Interest* in time for publication.