Gresham's Law and the Logic of Efficacy

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Sir Thomas Gresham, 1519–1579, was a successful businessman and financial advisor to Queen Elizabeth I of England, whom he served as Royal Exchanger and as the ambassador to the Netherlands. Although Gresham's Law—bad money drives out good money.—was discovered earlier and was stated more clearly later, his was the wording by which we know the "law" today.

What does "bad money drives out good money" mean? It refers to is the historical observation that when "coins containing metal of different value have equal legal-tender power (i.e. equal face value), then the 'cheapest' ones will be used for payment, (and) the better ones will tend to disappear from circulation."Why do the better ones "disappear from circulation?" For one of two reasons: either because, suddenly more valuable, people hoard them as a form of investment, or because the state—via recall, melting-down, and re-minting—converts them into larger quantities of a cheaper, more alloyed coin of the same face value, some percentage of which the state keeps to itself.

Now Gresham's Law is avowedly about money. It presumes the existence of money as a universal medium of exchange produced and warranted by the state. Specifically, Gresham's Law is about the value of different coins thought of as so-and-so-many-ounces of some rare metal like gold, silver, or bronze, and the disparity between these values and their nominal, accepted "face" value in the act of exchange for goods and services (or yet other coins).

Occasionally, though, Gresham's Law is extended. These extensions take the form of large and usually vague claims that "bad x drives out good x," where x is anything that the proclaimer holds in high regard and that is disappearing or being "debased," from good kosher hot dogs to math education, from honesty-in-politics to quality-built homes. Such popular extensions are rarely argued with any

precision or pursued very far, making it easy for economists to dismiss them all as trivial. Indeed, most modern economists think of Gresham's Law as itself somewhat trivial, a curiosity, narrowly applicable to periods of currency bimetallism—for example, in the mid 1800s in the U.S. when both silver and gold dollars circulated and the latter eventually were displaced—or to the massive currency debasements that were carried out with regularity in England, France, Spain, and Italy in the fourteenth through seventeenth centuries in order to create revenues for their royalty (who, of course, owned the mints that took in good coins and issued newer "badder" ones)...or at any rate, to times past when "money" and "coinage" meant the same thing, which they certainly do not today.

I shall be kinder to the extenders of Gresham's Law however. But also more strict. For what I wish to argue, ultimately, is that Gresham's Law largely accounts for "money" itself and not the other way around. Like the principle of arbitrage and perhaps even more so, Gresham's Law names a process inscribed into the very texture of commerce, lodged deep within the very nature of economic exchange, and operating before the introduction of money and after it. Gresham's Law, to my mind, is no mere curiosity applying to coinage. It's reach, indeed, extends into architecture and it evolution, under market conditions, as a form of financial asset. So back to Gresham's Law in its classic form.

If A is a coin containing 50% silver and B is a coin containing 10% silver and both have the same face value, it will profit the owners of A-coinage to turn it into B-coinage. Historically, as I have indicated, this "turning into" meant taking bags of A-coinage to the official government mint where, for a fee, A-coins were taken in and more, new, "debased" B-coins were given back in return. In this way, with thousands of people taking advantage of the process, the "good" money rapidly disappeared from the marketplace and the "bad" money became the one that circulated, eventually "driving out" the good. Over the long term, repeated debasements had the effect of making the buying power of coinage depend less and less on its metallic content and more and more on the state's warrant that the coinage was money of the worth stamped on its face. Soon, though, going to a government mint was not necessary to carry out the conversion. The warrant of a state-authorized bank was sufficient, and by the 18th century private banks in the Europe and the U.S. could and did issue unique currencies of their own, usually paper notes of redemption—"bank notes"—backed by gold and precious metal holdings.

A moment's consideration will reveal that the exchangeability of one form of currency for another at the mint, or at some barter market for their base materials, is not a necessary condition for Gresham's Law to operate. It suffices (1) that the cost of production and use of one currency be lower than the other, (2) that people be indifferent as to which is tendered in payment for goods, and (3) that the issuing authority be indifferent as to which is tendered in repayment of debts and in the payment of taxes. Barter market or no, re-minting or no, finally, only the cheapest-to-produce-and-use money circulates—i.e. only "bad" money is widely used—until

yet "worse" money drives it out, currency such as paper bank-notes (that have very little material or embodied-labor value) and finally, today, computer records (that have even less). (For over a hundred years, tobacco, by the pound, was the dominant currency in Virginia, Maryland, and the Carolinas. Needless to say, the quality of the tobacco used for this purpose quickly descended to crushed bits of stalk, chaff, rotted leaves, and so forth, bad-smelling and quite dreadful to smoke.)

The smoothness of this succession from commodities to coin to paper to bits depends on a number of factors; among them these two important ones: first, that the state's authority to control the total supply of money, and to declare and warrant its face value, remain intact, and second, that sellers in the marketplace do not post two prices for the same good, one price for payments in good money, one price for payments in bad money (the former being the lower of the two). If there is no control over the amount of money in circulation, of course, then any increase that exceeded the real need for new money-tokens to mediate new and different exchanges would lead to economy-wide wage, price, and interest rate inflation. And indeed, floods of newly minted or imported currencies (like gold) had exactly this unintentional effect time and time again through history, until governments took over complete control of mints and created central banking systems that could regulate the total supply of money more or less at will.

Left to itself as it were, Gresham's Law would have all money vanish as a material manifestation to become merely an abstract unit of accounting, an item in and for trade only, with zero manufacturing, transaction, and storage costs. Tempering this movement, however, there remain several practical reasons for a variety of types of coinage and paper notes to co-circulate, as we see them do today with currency-neutral posted prices. These reasons all have to do the actual convenience of paying for things, with tradition, and with lowering transaction costs in general. After all, one would not pay for a house with dimes, nor for a packet of cigarettes with a money order. Shoe-shiners will not accept credit cards, and most restaurants will not accept personal checks. At any given point-of-sale, the appropriate method of payment follows customary, convenience- and trust-based patterns. These in turn are overlaid upon the law, which, in most countries, makes it illegal for a vendor to refuse payment in "legal tender" from anyone who offers to pay the price asked.

Nonetheless, historically, the drive to dematerialize the means of payment is a powerful and continuing one. Indeed, as payment becomes solely a matter of adjusting "balances" in (at least) two guarded computer's memories, the buyer's and the seller's, so the dream of a totally cashless society is steadily becoming a reality. Soon it will be good-bye to bank tellers, to marble bank lobbies, to cash registers, jingling pockets, rat-eared checkbooks, even automatic teller machines... Hastening the movement is the fact that substantial transaction charges can, for a while at least, be demanded from all money-users for the convenience of not using physical currency (think of today's $1.50 per ATM-withdrawal charges!) although the true cost per transaction to the bank being "passed along" by these charges are vanishingly small. These charges become one more source of profit to the financial

institutions that provide the cashless society's computer-run accounting systems. "E-cash," electronic cash, digital money...all sound very new, but they are just one more step in a long chain of Gresham-guided evolution.

For better or worse, behind Gresham's Law runs a certain, inexorable, efficiency-related logic that affects far more than the nature of money. Indeed, it is a logic that in a certain way explains what money is. We have to take one more step deeper into the phenomenon before we can return with any treasurable insights.

The logic of efficacy

Take any physical object: a chair, a shoe, a building, a tree… As a simple consequence of its physical existence it has a huge number of qualities or properties. For example, it has a temperature, a color, a form, a rigidity, a texture, a chemical composition. Indeed, it is likely to have all of these properties spatially distributed and temporally varying at many scales—micro to macro, in wholes and in parts, in fleeting and in permanent states—and this in immensely complex-and-organized patterns down to the atomic. If the object is (or was) a natural one, then it also has (or had) a growing life with life's full complement of biological complexity-and-organization. If it is an artifact, then it also has a history of design, manufacture, use, and ownership.

The object's ancillary effects on its surroundings are apt to be many and varied too, from adding load to the ground or floor it sits upon, to deflecting wind, blocking views, emitting odors, etc., effects not all of which are intended. It may be host to a billion micro-organisms, food to a dozen animals, decoration to certain human tribes, and so on, and on, and on. My point is this: to know or describe any ordinary physical object completely would be a lifetime's work, if not actually impossible. In our dealings with things, therefore, we perforce pay attention to a small fraction of the enormous set of their qualities or properties.

Now, for a given good, let us identify the largest subset of distinct characteristics we could pay attention to if we had the education, motivation, sensitivity, and opportunity to do so, and label that set $Z = \{z\}$. Each member of Z, z_1, z_2…z_N, is an "element of description," an elementary fact about the good, thought of not as the description itself, but, in realist fashion, as a distinct feature of the object that z describes. Let the total number of characteristics in the set be denoted N_Z. We can call N_Z the "size of Z".

Now, the size and actual composition of Z is changeable, to be sure, depending on the sensitivity of the best observer, the state of science at the time and so on, but it is nearly always larger than the set $V = \{v\}$, which is the subset of all characteristics we commonly value it for, economically or otherwise. It follows that $N_V \leq N_Z$. The set difference between Z and V, Z – V, is $(N_Z - N_Y)$ in size. That is, $(N_Z - N_Y)$ represents the number of all the good's characteristics that are considered superfluous, expendable, irrelevant, that serve merely as a vehicle (like a plate for food), that are

hidden or not appreciable and thus, we think, not responsible for its ability to satisfy our needs, but that do cost something to produce or transport. (Note: the number N_V in this discussion is what N_G represented in Equation 7.3. We will return to this link later.)

Figure 1: The set of a good's characteristics, Z and the subset of those, V, that are valued.

Example. Z is a fresh, whole orange. V is the juice of that orange. Z –V is the orange's peel, pulp, and seeds. Why pay for Z when all you want is V?
Example. You are very thirsty. I offer you a glass of cold water. You drink. Whether the glass is a crystal goblet or plastic cup is irrelevant; whether it sparkles in the sun and will be carefully washed or is dull and thin and will be tossed under the sink is irrelevant. The set of all qualities that separate glass from plastic, Z – V, is superfluous. You are simply thirsty!

You offer me a coin in payment for the water, say a quarter. The metallic content of the coin is irrelevant; its size, age, heft, beauty, temperature, electrical conductance, are all irrelevant. All that matters is that someone else, later on, will also accept it as a 25-cent payment from me. This efficacy is constituted by the V characteristics of the coin, not its Z characteristics. (Actually—given that I would accept monetary payment from you at all in this simple scenario!—I would just as soon accept an IOU or check deposited straight to my bank, which is to say, a yet-further-reduced V.)
In general: say I am in the business of producing and selling a certain good. Within a given technological regime, because it is what it is, physically, the unit cost of producing the good is proportional to NZ. One day, I learn from market research that my customers are buying my product for reasons that derive from V, which is a subset of Z. This is fine if it costs me nothing to provide Z – V. But if I find that I am spending time, money, or effort producing (or passing along) the N_Z - N_V characteristics of the good that my customers and/or potential buyers cannot and/or do not appreciate, what should I do? Two alternative strategies face me:

Strategy 1: I can educate customers and potential buyers to appreciate these "extraneous" characteristics so that they come to value them and thus see them as not extraneous at all, or

Strategy 2: I can change the materials used, design, or production techniques of the good so that all not-valued characteristics are as far as possible eliminated.

Figure 2 illustrates these two strategies diagrammatically.

With Strategy 1, I can probably raise my selling prices and thus my profit margin. With Strategy 2, I can hold or lower my selling prices and still be profitable, this while holding on to or even gaining market share. Both strategies are in principle workable. But are they equivalent in risk or result?

No. For the first is something of an uphill battle. Educating, advertising, poetizing, pointing-out, sensitizing, persuading...all are efforts at changing minds and opening eyes that are labor intensive, expensive in themselves, and prone to failure. Besides, to the extent that such efforts succeed, the strategy as a whole may yet fail if a greater number (or even just as many) potential buyers are "turned off" as are "turned on" by the new level of connoisseurship being encouraged. What money the producer saves in not having to redesign and retool in order to "rationalize" the product, he must spend in marketing it.

> Figure 2. Two strategies for decreasing the difference between a product's valued (V) and non-valued (Z – V) characteristics.

Often, the easier course for the producer or seller to follow is Strategy 2, namely, to let price "do the talking;" to let price channel potential buyers towards certain goods—his goods—through minimizing the expenditure required of them to obtain "the same thing" even though, in fact, it is not. This strategy is also likely to increase the effective demand for the product, and hence the potential revenue from its sale, because it aims at the greater bulk of buyers whose incomes, as a rule, are the lower. And so, in general, under downward price pressure, the superfluous qualities of a given sort of product are stripped away until only those that are "selling points" remain. Strategy 2 dominates. Like coinage under Gresham's Law, products tend to become (1) no more than what descriptions of them can legitimately say they are and have people agree, (2) no more than what can be immediately appreciated about them at the point of sale, and/or (3), no better than they have to be to deliver the desired "utility," for whatever period is conventionally acceptable. Form follows function until it fits like a glove.

I will return to discussing the two strategies together again later in this chapter. For now, here are some of the unhappier results of Strategy 2.

• Let Z1 represent the training required and the level of neural activity involved in doing arithmetic in one's head; let Z3 represent the training required and the level of neural activity involved in doing arithmetic with a calculator. If all that matters, in class or at work, is the production of quick and correct answers to arithmetic problems, V1, then the capacity for doing mental arithmetic will atrophy. The use of calculators will "drive out" a skill that may well have invisible, undetected, benefits in other areas of cognition, as well as make unnecessary a good part of traditional math education.

• Let Z1 be a tailored suit, with all its parts and refinements. Let Z3 be a cotton T-shirt and jeans. If in the name of individual freedom and egalitarianism both become equally acceptable wear at the symphony, the opera, a fine restuarant…then, more or less slowly, more or less surely, T-shirt-and-jeans at concerts and fine restaurants and other venues once regarded as "fancy" will become universal.

• If drinkers cannot tell the difference between twelve-year old whiskey and seven-year old whiskey, then seven-year old whiskey (or younger) will sooner or later be found in bottles ambiguously marked "No. 12."

• If organically grown fruit and vegetables cannot be told apart from those grown with pesticides, then sooner or later government regulation and testing will be required to certify the difference.

• If people with deep psychological problems can be made to feel better by taking pills rather than by engaging in the expensive and (let it be admitted) not-always-successful process of psychotherapy, then clinical psychologists and psychiatrists will no longer try to help people understand themselves in any new way through extended, caring dialog. Nor, informed by a knowledge of history, philosophy, religion, or literature, will they help people examine their relationship to the world and to the "human condition." Instead, clinicians and psychiatrists will become valued (and paid) increasingly only as keepers of the gates of pharmacological Zion, while their educations in anything but chemistry and neuroscience will atrophy for being "pointless."

• If religion A has a larger number of rituals, prescriptions, and proscriptions than religion B, then all persuaded that religion B offers the same inspiration, comfort and access to God will become adherents of religion B, and simplicity-loving gods will "drive out" complexity-loving ones.

• If two educational institutions offer the same quality of education but one calls itself an Institute and the other calls itself a College, the one calling itself a College will attract more students and can demand higher fees. Ditto with Colleges and Universities, Schools and Institutes: degrees from the second-named deliver more prestige without real cost or the guarantee of a better education. Thus the inflation of higher-education institutional names, as occured in the 1940s and 50s in connection with the G.I. Bill. (For example, the "normal schools" of the 1930s became obsolete, turning first into teacher training institutes, then colleges, and then Schools of Education in large universities.) The trend continues today, as does the more straightforwardly Greshamite trend, which is to provide the least-thorough education possible that can still pass muster with an accreditation board, the latter being an institution that itself is under continual pressure to "update" standards. Needless to say, the updating is nearly always downward in difficulty, in time consumption, and in complexity.

• If, in their hiring practices, and for any number of reasons (including fear of transgressing anti-discrimination laws), employers do not distinguish between academically high- and low-achieving high school graduates, then the academic performance of non-college-bound young people at high schools (and elementary schools) will decline. Or rather, they will have one more reason to decline.Later, of course, if a smaller set of skills will produce the same product as a larger set of skills,

then employers will neither train workers to have any more skills than absolutely necessary nor pay anyone more who is "over-qualified" for the job.

• If leather seats are a mark of quality in expensive cars and we cannot easily tell the difference between leather and leather-patterned vinyl, then cars with "leather seating areas," i.e. cars that economically mix real and simulated leather here and there in order to capitalize on our inability to tell the difference, will come to be the norm. More seriously: if consumers cannot tell directly, at point of purchase, whether a car or school bus is safe under certain accident conditions, then their manufacturers, citing price competition, will do no more than meet the safety standards required by law, and consumers will assume that signs of legitimacy (stickers, say, announcing that this or that inspection has been passed) are sufficient.

• Visit a television sound-stage or production facility and you will be appalled at the tackiness, grime, and disrepair of the set. How is this acceptable? Because with the poor resolution of American broadcast television, viewers cannot tell the difference. Producers reason: "why spend money and effort crafting sound-stages beautifully? After all, have not theatrical sets for hundreds of years been mere fronts, effects, surfaces, with all manner of inelegant props holding them up, counting on the audience's (or camera's) inability to see around corners or to see detail? With the adoption of high-definition television (HDTV), most of television's stage sets will have to be rebuilt to movie-standard quality. But, of course, no better.

• If all that can be seen from the road by the majority of national park visitors is a few hundred yards of forest depth, then loggers will find ways to clear-cut the hinterland as close as possible to this limit. This logic goes further, into "real" places like downtowns, and not just places of entertainment like Disneyland or Las Vegas. Indeed, wherever the viewers' visual and tactile access to the world can be controlled, no more than surfaces will be provided.

• Let Z1 represent a house of a certain size and combination of amenities that is well designed, well detailed, and well built with good materials through and through. Let Z2 and Z3 represent coarser houses, with fewer niceties and cheaper materials (veneers, for example, instead of wood, or fake marble instead of real, hollow-core instead of solid doors, and so forth), and yet of the same square footage and number of rooms and list of amenities, V1. If all that matters to house buyers is total size, number of rooms, and list of amenities, i.e. V1, then the coarser house, which costs less to build and can be sold a little cheaper, will sell before the finer one will, and in general (for a given neighborhood) houses of the cheaper type will come to outnumber houses of the richer type to which they are "for all intents and purposes"—a telling phrase!—indistinguishable. The set of features Z1 – V1, if noticed at all, will be characterized by the sellers of the cheaper houses as just so many "bells and whistles," and certainly not worth the money they cost. More so will this be the case if most owners buy solely with a view to resale, as we have seen. If it is determined once or twice, early on, that pretentious facades constitute that part of V1 that helps resale, then pretentious facades will drive out modest ones,

this in a self-perpetuating chain that can easily survive the fact that very few people now like pretentious facades, or ever really did. Similarly, if maximizing resellability is the most significant purpose in making/building/buying a home, then houses and the land they sit upon will "evolve" towards a market-proven average or type which really suits no one at all: a sort of coin, a form of money. a financial instrument.

• If Z1 is the set of all things that a bank building is, or a lecture room, or a campus, and V1 is the set of all things that are clearly done there—withdraw and deposit money, negotiate loans, listen to a teacher, go from class to class—then electronic banking by computer, telephone, and ATMs, and "virtual universities" with TV and on-line classes, both of which ostensibly perform the same functions as are outlined in their respective V-sets, will replace the concrete and stone banks, the musty lecture rooms, eye-contact with tellers and teachers, and the treed campus avenues with all their irrelevant-to-V affordances.To be sure, many grand old buildings are saved by preservationists, even restored, and put safely away from the marketplace. This is Gresham's hoarding of the gold coin and putting the cheaper coin—the paper-thin buildings we live in for a while and then trade as "real estate"—into circulation. More so does this become the trend as human attention is further diverted from people and places and things to what-appears-on-computer-screens, and, concomitantly, as finite "resources" (i.e. time and money and know-how) are diverted from servicing buildings, their grounds, and libraries, to servicing computers, their networks, and digital contents.

• Let Z1 be well researched, well written, and carefully edited journalism; let Z2 or Z3 be poorly researched, barely-edited journalism that effectively reports the same news, V1. If all that matters to readers is that The News be reported as soon as possible, then bad journalism will drive out good. When local TV stations determine that disaster, crime, and "human interest" stories are cheaper to produce and more watched than news of political, cultural, or scientific events, then news programs that once—on principle—gave broad and balanced coverage to all the news will come to concentrate only on the sensational.

• Ditto with the printed word and the on-line word. Today, newspapers and libraries rush to go on-line (as though reading from a screen was anything like reading from a paper page). They are supplanted anyway by the rumor mills of newsgroups and chatrooms and by reams of undigested data made available "for free," without the benefit of editor or librarian. College and high school papers fill with erroneous and unsubstantiated facts gathered from World Wide Web searches that turn up mostly commercial, enthusiast-group, or personally "published" data and opinions. This material is easier to come by, of course, than material found after physical (or even electronic) search for the authoritative, fact-checked, cross-correlated and edited information that for centuries has formed the backbone of book publishing (at least in its non-fiction form).

• In a digital world, letter-writing all but disappears and becomes exotic, sentimental, like the fountain pen (which itself replaced the more sensitive and

artful quill pen, and was replaced in turn by the stalwart and cheaper ball-point pen, the felt tip, the rolling ball...). By whatever writing instrument they are created, however, hand-written letters on nice paper—physical, odiferous, palimpsestic, and personal—become more highly valued exactly as email is taken to be "the same thing, but faster:" the cheaper coin.

• Similarly, multimedia CDs are easier to read—or should I say "interact with"?—than books, and claim to convey the same information, which they actually do not, so far falling well short of the comparable book's comprehensiveness, ease of use, pictorial resolution, and ability to map the sense of time and place established by dealing with a book's physicality to the times and places inherent in the subject matter being read about.And so our children will soon spend the better part of their school days clicking their way through screenfuls of impoverished images and reduced paragraphs—mere captions—constructing in their minds a very loose picture of the subject matter, a picture pieced together, if it is at all, from the collage of "hyperlinked" data which they experience in an arbitrary order of scrollings and snatches. So immediately rewarding, too, is the process of clicking to get a whole new screen, or to get something to happen, that we can expect multiple-choice exams—already a degradation of active, problem-solving written exams—to disappear, to be replaced with some sort of procedural tracking of mouse-clicks through a database, judged "intelligent" or not in a statisical way.

• One might have no objection, in these last examples, to the whirr of a hard drive replacing the sound of paper, or to the glow of a phosphor or backlit LCD screen replacing the sheen and feel of a paper page: both media—computers and books—have their charms. Lugging heavy book satchels between classes is surely not a necessary part of being a student, and if electronic books can convey the same information (or more) without the weight—if they can provide the same intellectual discipline and fineness of display (or better) without the weight—let us have them! This is not the point. The point is that the elimination of difficulty (in reading, calculating, understanding, building, dressing, speaking, doing, etc.) frequently betokens the elimination of a beneficial complexity, of real content and nuance, of longer-term usefulness, of higher quality experience. It often involves the elimination, in other words, of the qualities in the set Z – V that run up production and learning costs to be sure, but which, unwittingly perhaps, we count(ed) upon as constituting the fullness of the thing itself and that provide(d) the source of our pleasure in mastery and connoisseurship.

Most of us are dispositionally set to wishing that more could be had for less: more fun with less effort; greater value for less money; more accomplishment in less time. Who, as it were, could blame us? Life is short. But in our impatience to pull off this trick, we are prone to imagining it done! We turn a blind eye to the cheapening we have accepted, or, when it is pointed out, argue, largely on faith, that we have traded difficulties that are not worthwhile for "opportunities," always vaguely defined, that are. As a culture, collectively, the result is this: that any impoverishment of the set of attributes, qualities, and characteristics widely understood to be of value in any

good, sooner or later leads to a corresponding impoverishment of what is produced in the name of that good, as that good. This is Gresham's Law at its most universal. And architecture has been chief amongst its twentieth century casualties.

Contrast this with the ways of nature.

As we know as a matter of general knowledge, biological and cultural evolution differ in several ways. In biological evolution, information is transmitted from generation to generation by genes; in cultural evolution it is transmitted by ideas and practices, or "memes." In biological evolution, change takes place over thousands and millions of years. In cultural evolution, change can take place over as little as ten to a few hundred years. And so forth.

Few of us, however, remember that whereas in biological evolution harmless-and-useless genotypic traits are as happily passed along as positively useful ones, in cultural evolution under a strict economic and technological regime, all "species" of goods are reduced to their least physical, least difficult-to-produce configuration. Those traits and qualities of a good that are not sufficiently valued by enough consumers are as mercilessly removed as harmful ones: that they cost time and/or money to produce is "harm" enough. Waste is not tolerated; performance is all. Indeed, where nature qua nature is profligate in generating variations, extravagant in expending energy, and fairly bursts with accidental and unnecessary finery, the fruits of modern market economies and mass culture are, by comparison and with few exceptions, unripe and miserly. Under intense downward price pressure from consumers, and in the absence of rapid technological progress in the means of production, what I have called Strategy 2 dominates: all non-obvious, hard-to-describe qualities of a given category of goods being stripped away until only those that are clearly "selling points" remain.

For better or worse, nature knows nothing of Gresham's Law.

The "profit " motive.

If is it true, as have I asserted it is for many important categories of goods, that reducing the number of attributes understood to be of value in that category will eventually lead to a corresponding reduction of what is produced as that good, then what in our economic system encourages this reduction to take hold in the first place? And when it does not take hold, as it has not for many products—products that, on the contrary, have grown in marvelousness and complexity over time and indeed, may not have existed at all before, like cars and computers and movies—why? Does Gresham's Law, like some disease, strike only the already-weak? Is it an agent of natural selection that we really ought to have the wisdom to welcome? One answer is obvious: Gresham's Law (extended) is fueled, as it were, by the normal—indeed laudable—desire of producers, sellers, and resellers to cut production or acquisition costs relative to fetch-able prices, so as to open up the gap

that is the profit they deserve for their ingenuity and risk-taking. Fair enough. But not far enough. Where does this impulse to cut costs and lower prices rather than raise quality and raise prices relative to costs come from? After all, profit is a difference between two numbers, not an absolute number. Cannot handsome profits be made from producing high quality, high cost items? The demand certainly is there: everyone wants more sophisticated goods and tools, more beautiful environments, better educations, richer life experiences, etc., etc. as Tibor Scitovsky points out in *The Joyless Economy*. And, what is more, everyone would like to be involved in making and/or purveying these qualitatively superior goods. What prevents this higher-quality world from evolving more quickly and evenly, or, in some places, at all?

I suggest that it is the overriding, all but universal drive to "save money." This drive, felt by all, issues primarily from two sources:

First, from the fact of unequal income distribution. This causes the size of the potential market for a given class of goods quickly to become larger as its prices fall. Thus, under conditions of between-seller competition, it is in usually in the interests of every producer-seller to push his prices down just fast enough to match or undercut most of his competitors, so as to gain sufficient market share (and sufficient revenue thereby) to offset in total profit what might be sacrificed in average, per-unit profit. And if, through the adoption of new production and/or distribution technologies, a firm's marginal costs can be made to fall faster than its asking prices need to fall in order to maintain or increase market share, then that firm's total profits are doubly assured.

Second, and more basically (for the first reason depends ultimately on this one), is the fact that most people, rich and poor, would rather spend less time and money on/for V than more, and will thus give their business to the seller who provides V at the lowest price and/or with the least fuss. Common sense, is it not? Basic economizing behavior.

But let us press harder on this last piece of common sense. *Why* would we rather spend less time and money to obtain V than more? This is not at all a trivial question. Given fixed resources and income, is it so that we can have more time and/or more money left over to spend on other things, or on greater quantities of the same thing, so as to have, in total, more "stuff?" To be sure this is one factor, especially for low-income families. But what else do we get when we "buy cheap?"

This: in expending the least amount of time and money on V, we can retain—indeed maximize—the freedom we have to choose how to spend the savings we have "earned." This is what I meant earlier when I spoke of exchanging worthwhile and difficult goods requiring commitment for an increased sense of increased opportunity. After all, to buy something is to commit to (ownership of) the thing bought. Certainly, it is to have lost the option of spending that money in any one of a hundred other ways. Similarly, to actually do something is to commit a certain

amount of one's finite lifetime to doing it, and to have lost the option of doing something else with the same allotment of time. Both are reductions of the freedom that still-having-money (and still-having-time) bestow. Indeed, what is work but the giving up one's freedom to do anything one wants in return for compensating salary or wage, one's freedom come back, as it were, as money? Similarly, what is interest but the money-reward for investment, which is patience, which is the commitment of one's money to value-productive activities rather than to choice-ful spending: freedom lost now to come back as more freedom later...bread upon the water?

Moreover, when we adopt the rule "buy the lowest price X" and X is also rather generically specified (e.g. "an hotel room," "a pair of brown shoes," "a college degree"), our lives are also considerable simplified. The rule "buy the lowest price X" delivers to us an advantage beyond winding up with money to spare. Because the rule demands no reflection or exertion, it delivers to us also more freedom as time. After all, why be delayed with investigating, weighing, and wondering about the value of this thing over that when this very activity cuts into the pleasurable time one might spend choosing among other things more lightly, with less agony? More often than not, of course, the rule "buy the lowest price X" simply lets us be lazy. Rather than have to discriminate between rooms, or shoes, or educations on the basis of their quality, origins, or long-term consequences—a complex pursuit with often-inconclusive results—it lets us "cut to the chase." And it lets sellers cut to the chase too with this parallel and simplifying challenge to buyers: "How much do you want to spend?" or "What's your bottom line?" Here we see Gresham's Law applied not just to the product but to the marketing process itself.

Under the combined effect, then, of Gresham's Law, the economic logic of efficacy, and a society-wide fixation on maximizing freedom—and freedom as soon as possible, note, which is itself a freedom-seeking strategy in as much as it economizes upon time spent achieving it—we can begin to see how easily price and convenience can become the dominant bases for market competition amongst sellers for buyers.

In short, low prices and time- and trouble-saving convenience recommend themselves to us easily, "naturally." Is it not natural, indeed rational, to get the most for the least, to save time, to conserve our resources, to keep our options open for as long as possible? One is hard pressed to say no. Cheapness and convenience, however, are often pursued (and achieved) at the expense of producing (and then having) goods of significant material quality, lastingness, or worthwhile difficulty in the making, goods that take time to appreciate or master, or goods that inspire and then help us to do our duty. For these are all qualities of products and of experiences that entail giving up some considerable amount of freedom in order to make them and to enjoy them, that entail, most likely, the pursuit of more perfect satisfaction of the lower needs of the stratigraphy for oneself as well as for others. In short, these are goods that entail discipline, dwelling, and commitment—the very opposites, respectively, of mental, physical, and social freedom.

Some larger economic consequences.

The process I have just described manifests itself clearly the macreconomic level. For one, as Robert Kuttner writes, "(c)ompetition (between firms) based on labor costs tends to hammer down wages, repeal tacit social compacts," such as providing a livable wage to all who work full time, "...and wreak havoc on assumptions of career ladders and job security."

For another, we might add, competition between firms based on (reducing) capital costs also tends to hammer down product quality, repeal tacit social compacts to provide safe and effective goods, and wreak havoc on the environment with chemical and aesthetic pollution. And what exactly are these firms competing to do, that these outcomes are so widely tolerated? The answer is obvious: to secure (at the very least, but preferably to increase) their own total profits, and this through "containing costs" and lowering prices (relative to competitors, anyway), thus gaining market share. But where is the pressure to lower prices coming from in the first place? Again, this is the real question.

It comes, ultimately, from the mass of the workers acting as consumers and trying to "stretch" their income dollars. *Each worker-now-consumer is in effect trying to outmaneuver all others*: each tries to be highly paid for what he or she does for a living while at the same time applying indirect pressure—through price-sensitive shopping—to keep all others from being well paid for what *they* do for a living.

What develops from this strategy, widely enough followed, is a descending wage-price spiral (in real terms) that no mere nudge can reverse: lower wages chasing cheaper goods whose corner-cutting, labor-saving, manufacture and marketing yields lower wages yet.

The process is exacerbated by a global economic system that allows companies from high-wage countries to have their brand-name products be manufactured by employees or subcontractors in foreign, low-wage countries, and then be imported. Company shareholders benefit from the profit boost inherent in the ploy, as do final consumers to some degree: the stuff is cheaper. But the working and middle classes of the high-wage country also have their wages depressed by competition from the very foreign workers whose products they feel ever more compelled to buy for their cheapness. The net benefit is arguable, to say the least. (Defenders of free trade, keep reading.)

The same story may be told of automation. Here machines and computers play the part of lowly paid foreign labor while the owners of the machinery—capitalists by definition—and the top echelons of management make off with the bulk of the profits released by the lowered manufacturing costs of the "same" goods. Similarly, low-skill service jobs, although they cannot be exported to foreign countries, can also become subject to immense and purely circular pressure to cut costs and

therefore prices and therefore costs...until a larger and larger part of the economy comes to consist of the poor serving the poor with the hardware provided by the rich.

None of this, of course, is news. It's a story as old as industrialization under capitalism, indeed as old as trade itself, alleviated in its outcomes for the working classes—white collar and blue—only by three factors:

(1) That downward wage or price spirals can take hold in particular industries and not in others. This means that, with sufficient job mobility and educational opportunity, a society can reallocate its labor resources to higher-wage areas of its economy, using going wages for various occupations as a signaling system and incentive structure, supplemented by public reporting and forecasting of the changing complexion of national industry.
(2) That the number and variety of cheap imports can go up, and their prices go down, faster than local real wages go down, leaving local workers better off for as long as that gap exists.
(3) That automation can increase product quality (durability, precision, beauty functionality) and reduce production and transaction costs at a rate faster than the average workers' lowering real wages disadvantages them. This third factor is an indirect form of profit sharing with the capitalists who own and deploy new labor-saving technologies.

Whenever and wherever these three "factors" work effectively and together, normal consumer pressure to lower prices, and between-producer competition to respond to that pressure and gain market share, can lead to overall benefits. Defenders of vigorous price competition have successes to which they can point, such as better and cheaper food, clothing, and household gadgets than ever. But whenever and wherever these three factors do not work effectively or together, the results are sadder: unemployment, underemployment, and social and environmental stress, this in the high-wage country if not in the low-wage country too when owners move their operations to a place with cheaper labor yet.

I do not claim with these remarks to have offered an original analysis of the global economic scene. The picture is far more complex than this, to say the least. My aim with these few pages has been, rather, to sketch out some of the larger-scale and visible consequences of allowing price-driven competition between producer-sellers, with its aim of gaining market share, to establish itself over quality-driven competition, with its aim of improving goods in both the production and consumption of them. And so, if I might turn at last to my home-field, architecture.

Architecture in the twentieth century has developed in the context of Modernism's thrall to "functionalism." But functionalism, once set in an economic context, is just another name for what I have called the logic of efficacy, a logic whose outcome, as we have seen, is extremely sensitive to "economies" in what needs—and does not need—to be included in the list of attributes slated to survive in (re)production.

One has only look to early twentieth century Modernist manifestoes and their crossings-out and sweepings-away of all things elaborated, decorated, or Victorian, of all things dependent on “sensibility” rather than common sense, and in favor of whatever was directly practical, hard, and necessary. Revolution was the watchword, rather than evolution. Everywhere envy of the machinic forms that industrial production had distilled down to their essential materials and geometries dominated. "Pure", "essential", "honest," making art "affordable to the working man" (even if that meant, as it did, redefining art to suit)...these were ideological means by which economic forces entered and conquered the hearts of post-war architects.

Over the rest of the twentieth century too, architecture's ownership and production became democratized. No longer the sole province of church, state, and aristocracy, or even "captains of industry," the production of architecture fell rapidly under the aegis of "real estate" and "development," especially in America. Anyone could play this capitalist game, from home-owners on up. Buildings of any significance or size were midwifed by architects to be sure, but they were given birth to by entrepreneurs nd owned and bought and sold much like any other commodity or investment good (or like slaves, to keep to the metaphor).

If buildings’ new role as tradable investment vehicles, as real estate, continues to dominate their other functions, we can expect that those we call works of Architecture and try to resist may succumb too, becoming with each decade more like money, money in another form: resellable, fungible space shrouded in glass.

Enter the ghost of Gresham.
