Reinforced concrete

> *No problem can be solved until it is reduced to some simple form. The changing of a vague difficulty into a specific, concrete form is a very essential in thinking.*

J. P. Morgan

I have a soft spot for concrete. My high school career was not distinguished by glory, in fact it was not distinguished by anything at all. However, I do treasure the memory of one triumph that is incredibly minor in the scheme of things, even in the scheme of high school triumphs, but affords me pleasure to this day.

I was on the debate team and also competed in some individual events. My best was Impromptu. The speaker is given a card which he is allowed to read once to himself, then once aloud. Then he must give a three minute speech on the topic. The cards usually contain a statement about current events (e.g. "The most important foreign policy goal for the US should be good relations with China") or an aphorism (e.g. "One is twice as glad to leap after a man who has fallen into the water when there are people present who dare not do so") with which the speaker can agree or disagree, or simply expand upon.

In the finals for the Impromptu city championships in Seattle, I was the second-to-last speaker. Of course, speakers are not allowed to be in the room for the previous speakers or they would learn the topic ahead of time. The card read merely, "Concrete". This is problematic for two reasons. First, it doesn't give the speaker a lot to work with. With most topics, you can start with some general introductory material while you organize your speech in your head. Second, it's short. Even stalling (which costs you points with the judges) it's hard to take more than five seconds to read the card twice, compared to the twenty or thirty seconds you usually get.

Anyway, I gave what I thought was a pretty good speech about why the single word "concrete" was antonym for such different concepts as "abstract," "soft," "imaginary" and "vague". It had an acceptable amount of content for an Impromptu talk, it was directly on topic and it ended exactly on time with a good and natural conclusion. Given the difficulty factor of the topic, I thought I had a chance for first or second place.

To my surprise, the room erupted in a sustained ovation. The speech wasn't that good. Generally, you get brief polite applause whether the speech is good or bad, in fact given that the spectators are mostly associated with competitors, they are happy to provide sympathy for a poor performance, and slow to celebrate a good one. I later discovered that all the previous competitors had given up, I was the first one to deliver a full length, coherent speech. Surrenders are common in early rounds, but usually by the finals of a tournament, and certainly in the city or state championships, you expect all competitors to complete a speech.

The last speaker was amazing. Totally unfazed by the topic, he gave a detailed technical history of concrete including the etymology of the word, its relation to cement, concrete-like construction materials in the ancient world, innovations that led to modern concrete and its uses in contemporary construction. It was later discovered that not only had he seen the topics in advance, he had written them himself and prepared his speeches in advance.

But here's the thing. Before the fraud came to light and the guy was disqualified, I won. He cheated, but I still gave the better speech. Since then I've often had awkward moments in public speaking, but I am sustained by that petty-but-proud memory.

Perhaps as a consequence of that formative experience, I have always preferred concrete reasoning. I like robust statistics that rely on direct measurements of the thing of interest to abstract arguments involving distributions and theoretical properties. I think most economic indicators are aggregated to the point of meaninglessness, and anyway are measured too indirectly to be reliable foundations for inquiry. A lot more people seem to have opinions on the relation of, say, inflation and unemployment, than can describe precisely how those things are defined or measured. And when econometricians stick those soft numbers into highly abstract analysis schemes like vector autoregression, it's not just garbage-in-garbage-out, it's garbage-in-regarbagized-garbage-out.

Therefore, I was predisposed to like a book titled *Concrete Economics*[i], which argues, ". . .[T]he single most important thing we can do to reinvigorate our economy [is] to shift out of ideological incantations and abstract obfuscations and talk concrete economics: Where do we want to go? What will the new economic space look like? Who will inhabit it?" Not only does the book advocate concrete discussion and analysis in general, it argues that concrete considerations have driven successful US economic policies in the past, but that abstract theories and ideologies have dominated since the 1980s, and led to unsuccessful policies.

For the most part, the authors adhere to their dictum to be concrete. However they do cheat on occasion. For example, "Indeed, the weight of manufacturing in the economy dropped by 9 percent: from 21.2 percent of GDP in 1979 to 12.0 percent at the peak of the last business cycle in 2007. That's a big number—almost two full Pentagons." Talking about the decline in manufacturing sounds concrete if you think of a shuttered, rusting steel mill surrounded by middle class housing that has decayed into slums or been abandoned entirely. But that's misleading. To get the numbers quoted by the authors, you have to categorize all economic activity into manufacturing and non-manufacturing, which is not always straightforward, and decide how to measure it. By employment? Revenue? Value added? Whatever you choose has to be converted to a common unit, such as dollars or worker-hours, which are only abstract representations of the physical reality you claim to be describing. Do you care who owns the facility, or who works there, or where it is located? Once you make these and a lot of other decisions, you need to measure things. And manufacturing is more concrete than a lot of things included in GDP, and far more concrete than a lot of things left out of GDP measurements that should be included in theory.

Doing the comparison in terms of military spending makes it sound more concrete, but actually does the reverse since it adds in all the abstractions necessary to convert the economic resources dedicated to the military into dollar terms. If all military spending were on manufacturing value added, and if the military initially bought all its supplies from firms with physical plants in the US, and switched to firms with physical plants outside the US, and the business loss was not offset by other customers, then saying US manufacturing declined by one Pentagon would be concrete. But since none of those things are true, the statement requires a high level of abstraction to be meaningful.

Of course, I don't deny that manufacturing has declined in relative importance in the US economy over the last third of a century. I believe that because out of dozens of ways to define and measure it, all show substantial declines, even if there are wide variations in amount. However I think equating the decline to 9.2 percent of GDP or twice military spending during the period, as Wolfgang Pauli might or might not have said, is not even wrong.

For a more pointed example, the authors write, ". . .[T]he American health care system. . .constitutes about 17 percent of GDP. Compare that with Germany (11.3 percent), France (11.7 percent), Denmark (11.2 percent), or Japan (9 percent)—all of which have older populations and better health outcomes." Anyone who has followed the healthcare debate even to the level of reading op-ed pieces knows that there are large differences in how those numbers treat things like taxes, elective procedures, litigation, research costs, equipment amortization, addiction and mental health services, documented and undocumented immigrants, alternative medicine and other big and small ticket items. Moreover they don't even purport to measure things like waiting time, missed work and unpaid home care by relatives or others. And this is only money, it doesn't consider whether healthcare jobs are good or bad, or the patient experience is delightful or miserable, or the costs are underwritten by people who can afford them or people who can't (or by people spending their own money versus other people's money).

Outcomes are far less concrete than costs. First of all, 98 percent of all things people seek healthcare services for are self-limiting, the eventual outcome is the same with or without healthcare. People visit doctors to treat symptoms or to speed recovery or to slow decline or to get reassurance that an issue is not serious. Second, aggregating outcomes requires establishing exchange rates among incommensurate things: an innocent child's disfigurement versus a criminal drug addict's withdrawal pains, a few weeks of healthy life for a beloved parent versus a year of maintenance of a coma patient nobody liked when conscious, physical therapy for a teenage athlete with a spine injury versus a liver transplant for an alcoholic unlikely to live out the year.

That's not to say that the US healthcare system is not more expensive and worse than other systems, just that the statement is too high a level of abstraction to be meaningful. In my experience, the people who want to fight about it, want to fight more than they want to improve healthcare. And the people who demand you respect their opinions because they've immersed themselves in the minutiae of the statement are lazy thinkers who have created virtual worlds in which they are expert, and care more for their fantasies than for messy reality in which they don't know much useful. Moreover it wouldn't do much good if anyone did know the answer. It wouldn't tell how to improve the US system, or even whether improvement was possible.

I prefer more concrete questions like how do various healthcare systems treat otherwise healthy adults under 50 who require joint replacement surgery due to injuries. With these you can compare costs for the same types of expenditures, and compare similar types of outcomes. You can consider the full range of factors, patient experience, healthcare job quality, rate of innovation; not just the stuff included in abstract aggregable units like dollars or some outcome quality metric. Patients who choose not to have the surgery, or who go to a different place for it, or whose treatments are complicated by other conditions, are some of your most important data points, rather than messy exceptions to be smoothed away somehow. You don't need assumptions or approximations or indirect measurements, you can talk to patients and service providers and people in ancillary businesses. You can check your political opinions at the door, they don't matter for the analysis, unless Christian Science is a political opinion.

Best of all, the answers to these questions are directly useful for improving healthcare. They will never be satisfying to someone who wants to deregulate or to nationalize everything. They will always show that all systems have things to learn from and things to teach to other systems. I believe that a few thousand empirically based, incremental improvements from focused, skeptical, unprejudiced, concrete investigations have done far more to improve healthcare than all the sweeping top-down plans based on aggregated costs and outcomes.

These baffling excursions into abstraction are nearly all in the first and last chapters of the book. In between is a lightning account of US economic policy from the Revolution to today. True to the book title, the discussion involves concrete policies and tangible effects rather than ideology or aggregate statistics.

The authors begin with Alexander Hamilton's *Report on the Subject of Manufactures* presented to Congress by the then Treasury Secretary on December 5, 1791. This set out the platform of Hamilton's Federalist Party. As the Federalists dissipated, Hamilton's banner was taken up by Daniel Webster and Henry Clay in the National Republican Party and later the Whig Party, under the name "the American system." When the Whigs imploded over the issue of slavery, Abraham Lincoln made Hamilton's ideas, along with anti-slavery, the cornerstone of the Republican Party.

Thus far the story is mostly conventional. In the first century of American independence there was always a sizeable constituency to support a strong central government, tariffs, immigration, subsidy of favored manufacturing businesses, infrastructure spending and financialization. While the authors attribute the policies to Hamilton personally, most accounts treat the ideas as evolving. For example it was President James Madison, a decade after Hamilton's death, who raised the tariff to protectionist levels, higher than the revenue-raising levels preferred by Hamilton.

While the pendulum of political power swung toward and away the Hamiltonian constituency over the years, as the authors note, its economic policy became more and more firmly embedded in US government. The agenda would be advanced under sympathetic Administrations, and only trimmed back a little under unsympathetic ones. During the Civil War, with the bulk of the opposition in rebellion and out of Congress, the Hamiltonian system made a great leap forward.

The main reason for this advance was that the policies worked in concrete ways for real people (real voters, anyway, it's not clear how women, slaves, freed slaves, recent immigrants, nonwhites or propertyless individuals—many of whom were prohibited from voting in most states for most or all of this period—felt about the economy). In addition the authors note that policies create entrenched interests to defend them, and that opponents to the policies often negotiated deals in which they received compensation to offset their losses.

In a departure from conventional accounts, the authors do not discuss an equally strong political suspicion of powerful government, big businesses, banks and immigrants. This group also managed to embed some core ideas the government. Most spectacularly, it killed any version of central bank from 1836 to 1913 (and it was reintroduced in weakened form through an unlikely and fleeting political alliance). It lives on in American cultural tradition. The Regulators of the Whiskey Rebellion retain affection, while the troops that crushed it do not (and those troops only managed to arrest a few minor participants, who were all acquitted by juries when tried). Hamilton's Whiskey Tax was designed to force financialization and organized manufacturing west of the Allegheny Mountains. It succeeded, but Snuffy Smith is still the comic hero, and revenooers are still the villains, 225 years later.

Tariffs create smugglers, and Jean Lafitte and Nathan Appleton are celebrated in stories and place names, while customs officers are not. Strong banking regulation suppresses currency, so counterfeiters were folk heroes from the 1820s to the 1860s. Bank robbers, from Frank and Jesse James to Pretty Boy Floyd captured public imagination and remain more popular than bankers (as Woody Guthrie's song on the subject goes, "Some will rob you with a six gun, and some with a fountain pen"). The first Ku Klux Klan commanded popular sympathy among most white Americans while the "carpetbaggers" it tarred and feathered were despised, at least until successor organizations with the same name after WWI blackened its name pretty much everywhere.

None of these reactions to Hamilton's policies are mentioned, nor the government violence required to enforce them. In addition to the violent suppression of numerous minor rebellions, the policies bear at least some of the blame for the Indian Wars, the Mexican War, the Civil War and the Spanish American War (on the other hand, they argued against the War of 1812). Customs officers enforcing 19th century tariffs were notoriously corrupt and violent, and the Secret Service formed in 1865 to fight counterfeiting was in its early years as thuggishly violent and lawless as is usual among secret polices. The Pinkerton National Detective Agency, which worked for both the government and for the sorts of businessmen who supported Hamilton's ideas and were supported by them, was no stranger to extralegal violence.

I think the authors overstate the importance of government infrastructure policy. They note the government subsidies for infrastructure projects, but not the fact that the majority of government funded projects failed, while the majority of successful projects were privately funded (of course, even a privately funded project usually needs government cooperation to buy public land or get eminent domain seizures). That's sometimes overlooked due to the success of the most famous government-funded projects, the Erie Canal and the Transcontinental Railroad.

Moreover, the subsidies were smaller than the authors suggest. Yes, ten percent of the land area of the continental United States was granted to railroads. But it was almost all essentially worthless land without the railroad. In a typical grant, the land for ten miles on either side of the track was divided into alternating sections, one for the government, one for the railroad. Essentially the government gave away half the land in return for private interests building a railroad that more than doubled the value of the land. That's not a clearcut subsidy, it's more like a financing. The government also backed railroad bonds, which is similar to lending money to the railroad. Moreover, a lot of the most valuable land, including land near rivers or population centers, was exempted from the grant. You can ride the route today and look out on both sides of the track to realize that the vast majority of the land is still empty, even with the railroad and a century and a half to fill it.

The authors write that conventional economic wisdom would be to auction the land off to the highest bidder. But that's only true under some unrealistic assumptions, the most important of which is that anyone had access to enough capital to both build the railroad and capture the increase in land value. It made much more sense to offer buyer financing. When the government gave away public land to homesteaders, it was also arguably collecting a greater present value from future tax collections than it could have gotten from an initial purchase price. European princes had been doing similar things for centuries to fill underpopulated dominions, and they had nothing in common with Hamilton ideologically, it was pure economic calculation (that's not to say that the American policy was designed for revenue maximization, just that it wasn't a pure economic giveaway).

Starting in the 1890s, the authors hew to their Hamiltonian line, while in conventional accounts it begins to blur. The Progressive Movement was Hamiltonian with respect to a strong central government, push for efficiency and support for infrastructure spending and financialization. But it opposed tariffs and unrestricted immigration; it supported labor unions, trust busting and business regulation rather than business subsidies. This led to some intellectually baffling compromises as the Progressives allied first with traditional Hamiltonians, then with their opponents. The authors' bilateral model (really unilateral model) breaks down and their account of the years from 1890 to 1920 is strained and unconvincing. Nevertheless, the book remains both original and enlightening by concentrating on the concrete effects of the economic policies rather than the ideological squabbles they still inspire.

By the New Deal, the authors seem to recognize some discrepancies, so they add an epicycle. In their view, the New Deal was pragmatic and concrete, but that its successful innovations came to define an ideology. I think that's true as far as it goes. The New Deal was all trial and error, but the political coalition came to treat it as revealed truth. That's not because its supporters were fooled, but because questioning any part of the doctrine risked unraveling the whole thing.

The trouble with this account, from the perspective of the authors' thesis, is there's nothing concrete about it. It says New Deal ideas dominated American politics from the mid 1930s to the mid 1970s (with important parts surviving today) due to its political features, not its economic effects. Moreover, like Progressives, New Dealers have one foot in the Hamiltonian camp and one foot outside.

However, the thesis does not break down completely. For one thing, elections have always turned on general perceptions of how good the economy is. Any party or President distracted by abstraction will be quickly replaced by one focused on, "the economy, stupid." Working within the framework of New Deal political alliances, anti-Hamiltonian President Truman was able to pare back some of the

Hamiltonian policies, and Hamiltonian President Eisenhower did a lot to restore and extend them. After that there is an interregnum, passed over quickly in the book, in which both political parties proved incapable of either extending the New Deal, or even making it work, or replacing it with anything better.

The authors lament that this breakdown led to the rise of ideological economic policy, divorced from concrete reality. While I certainly see that point, I think the authors fail to appreciate how bad the alternatives were. And a lot of the ideology proved out: deregulation and eliminating subsidies were good ideas, as was cutting marginal income tax rates and eliminating most deductions. I'm still a free trade advocate, although I understand the policy has always been applied selectively to the advantage of powerful interests, and should not be sold as a moral imperative, but as a sensible long-term policy from a global welfare perspective. I like the earned income tax credit and welfare reform and school vouchers. Rolling back the war on drugs, legal equality for homosexuals, better treatment of immigrants; all these are ideologically motivated positive changes.

Of course, none of these ideological prescriptions has been applied thoroughly or consistently, but I think they've pushed things in good directions more than bad. And despite the authors' account, there has been a lot more trial and error in this process than doctrinal purity. President Reagan spoke ideology but acted pragmatically, and Bush I and Clinton were as pragmatic as Eisenhower or Lincoln (but lacked some other qualities of those Presidents). I would date the retreat from concrete reality to 2000, and think it is enabled by both parties equally.

All of that is, of course, abstraction. What matters is what this implies for future course. Here the authors let us down by ignoring their title. They do not advocate throwing away arguments based on theory and high-level abstraction in favor of trial and error with pragmatic compromises evaluated by objective, concrete results. They have their own platform based on turning back the clock as much as fifty years on changes they don't like, and eliminating by undisclosed means anything they consider wasteful. Like their statements about manufacturing and healthcare, I don't think this is even wrong. You can't turn back the clock, and the idea that you can surgically eliminate waste and have the economic resources magically redirected into things you deem useful is a naïve fantasy. Moreover their argument for their abstract policies is based more on vilification of others than positive advantages. Even if they're right, political movements based on revenge—justified or not—end badly.

If I were to rewrite their last chapter for them, I would start with the observation that a lot of things are going really well, and billions of people are far better off than they were five, ten, twenty or fifty years ago. Primum non nocere. Let's do nothing that might interfere with the rapid decline in global poverty, the improvements in freedom and information sharing and knowledge and health, the amazing efficiency increases in economic activity. This is concrete, get out of the way of stuff that's working on its own, even if you think more rules will make it work even better.

Next, don't try to tackle big abstract issues or grand solutions of everything. Focus on concrete things you can make better, one thing at a time. And don't bet the ranch on one approach, try to identify the range of reasonable opinion, and let each viewpoint get a chance. Measure outcomes objectively and concretely, expand what works and cut back what doesn't. Don't worry about what various ideologies will think of the world that emerges from incremental improvements, just make sure you're working for improvements. Anything more is hubris.

I recommend this book for its stimulating account, although I disagree with 80 percent of its first and last chapters, and 20 percent of what's in between. The world needs more concrete economics and the authors have made a valiant attempt to provide a starting point. They can't live up to their principles fully, but it's likely no one can, which is one reason we sometimes let ideology ruin the picnic.

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[i] Cohen, Stephen S. and DeLong, J. Bradford 2016. *Concrete Economics: The Hamilton Approach to Economic Growth and Policy*. Harvard Business Review Press. B00O92Q6C6.