Chapter 5

Subproblem A
How to Overcome Change Resistance

The crux of a difficult social problem is almost always how to overcome system change resistance. Once that’s overcome the system will “want” to change. It will now eagerly accept the same solutions it was so vigorously resisting before. Therefore analysis must begin with change resistance and give it the greatest attention of all the subproblems. That strategy has caused this chapter to be the longest one in the book, because it has the most to say about what was found when instead of attempting the impossible task of climbing Mount Sustainability, we tunneled through it.

Inside the mountain was a feedback loop structure so simple and elegant it still makes me nod my head in silent respect, many years later as I write this chapter. Once the key loops were identified it was not hard to build a simple model, something to get started with. And then it was not hard to add the details needed to take SIP’s Analysis step to its logical conclusions, though this took years because SIP itself was also undergoing construction. With slow cautious digging the model reluctantly emerged. It was a heady time when the full model, and not the little pieces, finally snapped into life with the first few simulation runs that made sense and suddenly explained so much. A flock of WHY questions now had solid answers.

The model is The Dueling Loops of the Political Powerplace. What the Analysis and Solution Convergence steps found using the model is summarized below.
To me the most striking feature of the diagram is how totally different it is from conventional thinking. All environmentalists can currently see is what’s in the gray box. Their thinking, and thus their solutions, is trapped on the superficial layer. This makes overcoming change resistance an impossible problem to solve.

But there is a way forward. This chapter patiently builds the Dueling Loops model one step at a time by drilling down from the old symptoms to the intermediate cause, and on to the root cause and its high leverage point. A later chapter then performs the Solution Convergence step to find the fundamental solutions and fill in the right side of the social force diagram, which shows the new root cause forces.

Another striking feature of the diagram is its reliance on feedback loops to explain the fundamental layer. The root cause cannot be identified without identifying The Race to the Bottom among Politicians loop. Resolving the root cause requires strengthening two existing feedback loops, Truth Literacy Promotion and The Public Loves Those They Can Trust, and understanding The Race to the Top among Politicians. These are deep insights with powerful implications. The biggest, I would like to think, is that understanding a system’s key feedback loops at the root cause level allows solving any difficult large-scale social problem, if the problem is solvable.

In order to do that, let’s review the analysis model for this subproblem.

The Dueling Loops of the Political Powerplace

This consists of two feedback loops dueling for control of a political powerplace. One loop, The Race to the Bottom among Politicians, battles it out against The Race to the Top among Politicians. It’s a simple model with two main loops.

Here’s the real insight the analysis unearthed. The Race to the Bottom contains an easily exploited inherent advantage. This causes that loop to be the dominant loop most of the time in politics, as it is now in most countries. As long as The Race to the Bottom remains dominant, resistance to solving public interest problems like sustainability will remain stubbornly high. This is a dire situation. Unbeknownst to most, the world’s political systems are wrapped in what amounts to iron chains dragging these systems down a long slow slide to environmental collapse, since these systems are currently inherently incapable of solving the sustainability problem.

Fortunately the analysis also discovered a nugget of good news. The Dueling Loops model contains a promising high leverage point that has never been pushed on before with focused large-scale solutions. If problem solvers can see what we’ve seen—how the model works and why this is such an advantageous leverage point—they might very well unite and push on the high leverage point with proper solutions. Once they start doing that, the model makes a remarkable prediction: The political powerplace will flip from a dominant Race to the Bottom to a dominant Race to the Top, which will lead to quick solution of the sustainability problem.
Back in 2004 I was using pencil and paper to sketch possible feedback loop structures. All of a sudden one loop started to answer more WHY questions than anything I’d tried before. Shifting nodes and arrows around, it answered even more. That loop became the Race to the Bottom. The rest of the model grew from that loop, so let’s began there.

The Race to the Bottom

There are two feedback loops in the human system that, in the large, affect citizen’s lives more than anything else. They are the loops that politicians use to gain supporters.

Over time, social evolution has pared the many strategies available for gaining political support into just two main types: the use of truth (virtue) and the use of falsehood and favoritism (corruption). For example, a virtuous politician may gain supporters by stating, “I know we can’t balance the budget any time soon, but I will form a panel of experts to determine what the best we can do is.” Meanwhile, a corrupt politician is garnering supporters by saying, “Economics is easy. You just put a firm hand on the tiller and go where you want to go. I can balance the budget in four years, despite what the experts are saying. They are just pundits. Don’t listen to them. A vote for me is a vote for a better future.” The corrupt politician is also saying to numerous special interest groups, “Yes, I can do that for you. No problem.” Guess who will usually win?

The use of corruption to gain supporters is the dominant loop in politics today. Corruption, as the analysis defines it, consists of falsehood and favoritism. Most politicians use rhetoric, half truths, glittering generalities, the sin of omission, biased framing, outright lies, and many other types of falsehood to make themselves look as appealing as possible to the greatest number of people possible.

Particularly when an election is drawing near, most politicians use the ad hominem fallacy to attack and demonize their opponents. An ad hominem (Latin for against the man) fallacy is an attack on a person’s character rather than the positions he or she supports. The attacker attempts to change the subject from what really matters to what matters far less or not at all.

For example, the use of the Swift boat ads in the 2004 US presidential campaign to attack John Kerry’s character were an ad hominem fallacy, because they had nothing to do with Kerry’s political reasoning or positions. Other terms for the ad hominem fallacy are demagoguery, shooting the messenger, negative campaigning, smear tactics, and sliming your opponent. Finally, once in office nearly all politicians engage in acts of favoritism, also known as patronage. Bribery also plays a role in corruption, but this is illegal and so is not included in the analysis.
Politicians are forced to use corruption to gain supporters because if they do not they will lose out to those who do. This causes The Race to the Bottom among Politicians to appear.

The model uses the concept of memes. A meme is copied information capable of affecting behavior. All memes are learned from others, either directly from other people or indirectly through a transmission medium, such as books or television. All words, unless you made one up yourself, are memes. All learned values, such as “trustworthiness is good,” are memes. Reading, writing, and arithmetic, because we learned them from others, are gigantic sets of interrelated memes. Thus the entire foundation of all fields of traditional knowledge, such as biology, physics, and mathematics, are memes.

To understand how the Race to the Bottom works, let’s start at false memes. Rather than show the falsehood and favoritism that corruption relies on, the model is simplified. It shows only falsehood.

The more false memes transmitted, the greater the degenerates infectivity rate. The model treats arrival of a meme the same way the body treats the arrival of a virus: it causes infection. After the “mind virus” incubates for a period of time (a delay), the infection becomes so strong that maturation occurs. This increases the degenerates maturation rate, which causes supporters to move from the pool of Not Infected Neutralists to the pool of Supporters Due to Degeneration as they become committed to the false memes they are now infected with. Supporters Due to Degeneration times influence per degenerate equals degenerates influence. The more influence a degenerate politician has, the more false memes they can transmit, and the loop starts over again. As it goes around and around, each node increases in quantity, often to horrific levels. The loop stops growing when most supporters are committed.

A degenerate is someone who has fallen from the norm. They have degenerated. The loop explains why this occurs so easily. The term is not meant as a pejorative label, but rather as a hopefully temporary fall from virtue. The term equates to Jeremy Bentham’s “sinister interest,” which plays a key role in his analysis of political
fallacies. “By a sinister interest, we mean an interest attaching to an individual or class, incompatible with the interests of the community... we call an interest confined to himself sinister, when it operates in a direction contrary to those which attach to him as a member of the community.”

The dynamic behavior of the loop is shown in the graph. The behavior is quite simple because the model has only a single main loop.

Corrupt politicians exploit the power of the Race to the Bottom by broadcasting as much falsehood and favoritism as possible to potential supporters. This is done with speeches, interviews, articles, books, jobs, lucrative contracts, special considerations in legislation, etc. The lies and favors are a cunning blend of whatever it takes to gain supporters. The end justifies the means. The more influence a politician has, the more falsehood they can afford to broadcast, and the greater the amount of favoritism they can plausibly promise and deliver.

This is the loop that is driving politics to extremes of falsehood and favoritism in far too many areas of the world. This loop is the structural cause behind most of the corruption and bad decisions in government today.

Deception is the act of propagating a belief that is false. The Race to the Bottom employs a dazzling array of deception strategies. These are usually combined to increase their power. The five main types of deception strategies are:

Deception Type 1: False promise

A false promise is a promise that is made but never delivered or never delivered fully. False promises are widely used to win and keep the support of various segments of the population, such as organized special interest groups, industries, and demographic groups. False promises flow like wine during election season.

One of the largest false promises in recent history was the way Russian communism promised one thing but delivered another. It promised rule by the masses for the masses but delivered a totalitarian state. To justify its continued existence and hide the broken promise, the communist system manufactured a steady stream of soothing lies and used harsh repressive techniques on those who did not swallow the lies.

Near the end of the collapse of Russian communism, Václav Havel, writing in 1978 in Versuch, in der Wahrheit zu leben (An Attempt to Live in Truth) pointed out
the diabolical, self-destructive nature of the communist approach. It was the ultimate vicious cycle because:

…it turned victims into accomplices: by threatening them and their descendants with disadvantages, it coerces the victims to participate. When Havel became President [of Czechoslovakia in 1989] he reminded his fellow citizens of their complicity arising from their coming to terms with life in lying. Consequently, he exhorted them… to vote for candidates who ‘are used to telling the truth and do not wear a different shirt every week’. 38

Civilization has a learning problem. It does not seem to learn from its mistakes, even when they are pointed out. It has not learned the lesson that false promises work so well to destroy lives en masse that their effectiveness must be eliminated somehow. This is nothing new, however. We have been warned before. Long ago in the 14th century Machiavelli explained why false promises are so rampant with The Prince, in the chapter on “How Princes Should Honor Their Word:”

Everyone knows how praiseworthy it is for a prince to honor his word and to be straightforward rather than crafty in his dealings; nonetheless contemporary experience shows that princes who have achieved great things have been those who have given their word lightly, who have known how to trick men with their cunning, and who, in the end, have overcome those abiding by honest principles. …it follows that a prudent ruler cannot, and must not, honor his word when it places him at a disadvantage and when the reasons for which he made his promise no longer exist. … Everyone sees what you appear to be, few experience what you really are.

Deception Type 2: False enemy

A false enemy is something that appears to be a significant threat but is not. Creating a false enemy works because it evokes the instinctual fight or flight syndrome. The brain simply cannot resist becoming aroused when confronted with a possible enemy.

The two main types of false enemies are false internal opponents, such as negative campaigning, the Salem witch trials, McCarthyism, and homophobia, and false external opponents, such as the “threat” of communism and the second Iraq “war.” While communism and Iraq were true problems, both were trumped up enormously to serve the role of a false enemy. False enemies are often scapegoats. A scapegoat is someone who is blamed for misfortune, usually as a way of distracting attention from the real causes or more important issues. Name-calling, the straw man fallacy, the biased sample, the irrelevant premise, and dozens of other types of fallacies are used to create false internal enemies. Many of these are combined with the ad hominem attack.
When it comes to creating false internal enemies, the winning strategy is to **attack early and attack often**. This becomes doubly successful when those attacked are politicians in the opposing party: (1) The fight or flight instinct is evoked, which clouds the judgment and causes people to want a strong militaristic leader to lead them out of harms way. The attacker proves his militaristic capability by the viciousness of his attack, causing those witnessing the attack to frequently swing their support to him. (2) Attacks cause the attacker’s own supporters to fervently support him even more, because he has just pointed out why the opposition is so bad.

This form of deception works so well that attack politics has become **the central strategy** for many degenerate parties. Look around. Are there any political parties whose outstanding trait is they are essentially one gigantic ruthless attack machine?

**Deception Type 3: Pushing the fear hot button**

When a politician talks about almost everything in terms of terrorism, or communism, or crime, or threats to “national security” or “our way of life,” and so on, that politician is pushing the fear hot button. It’s very easy to push. Just use a few of the right trigger words, throw in a dash of plausibility, and the subconsciousness is automatically hoodwinked into a state of fear, or at least into wondering if there is something out there to fear. Whether or not an enemy actually **is** out there doesn’t matter—what matters is that we think there **might** be one.

Fear clouds the judgment, making it all the harder to discern whether there really is an enemy out there. Because we cannot be sure, we play it safe and assume there is at least some risk. Since people are risk averse, the ploy works and we become believers. We have been influenced by statements of what **might** be lurking out there. Our fear hot button has been pushed and it worked.

How effective fear can be is echoed in this quote:

Fearful people are more dependent, more easily manipulated and controlled, more susceptible to deceptively simple, strong, tough measures and hard-line postures,” [Gerbner] testified before a congressional subcommittee on communications in 1981. “They may accept and even welcome repression if it promises to relieve their insecurities. That is the deeper problem of violence-laden television. 39

That was 1981. Today, little has changed. Al Gore, writing in *The Assault on Reason* in 2007, included an entire chapter on *The Politics of Fear*. It may as well have been called *The Politics of Pushing the Fear Hot Button*. Below are some excerpts: (Italics and comments added)

*Fear is the most powerful enemy of reason.* Both fear and reason are essential to human survival, but the relationship between them is unbalanced. Reason may sometimes dissipate fear, but fear frequently shuts down reason. As Edmond Burke wrote in England twenty years before the American
Revolution, “No passion so effectually robs the mind of all its powers of acting and reasoning as fear.”

Our Founders had a healthy respect for the threat fear poses to reason. They knew that, under the right circumstances, fear can trigger the temptation to surrender freedom to a demagogue promising strength and security in return. [This is an example of a false promise.] They worried that when fear displaces reason, the result is often irrational hatred [which creates a false enemy] and division.

Nations succeed or fail and define their essential character by the way they challenge the unknown and cope with fear. And much depends on the quality of their leadership. If leaders exploit public fears to herd people in directions they might not otherwise choose, [which is why they push the fear hot button] then fear itself can quickly become a self-perpetuating and free-wheeling force that drains national will and weakens national character, diverting attention from real threats.... [A wrong priority]

It is well documented that humans are especially fearful of threats that can be easily pictured or imagined. For example, one study found that people are willing to spend significantly more for flight insurance that covers ‘death by terrorism’ that for flight insurance that covers ‘death by any cause.’ Now, logically, flight insurance for death by any cause would cover terrorism in addition to a number of other potential problems. But something about the buzzword terrorism creates a vivid impression that generates excessive fear. [Here terrorism has been used not only to push the fear hot button. It doubles as a way to create a false enemy.]

Deception Type 4: Wrong priority

A wrong priority is a goal that’s promoted as high priority, when in fact it should be a medium or low priority due to presence of other goals with legitimate high priorities. Wrong priorities stem from hidden agendas. A hidden agenda is a plan or goal a politician must conceal from the public, due to an ulterior motive.

There are many ways a hidden agenda can come about. A politician may support a certain ideology, and so bends everything to support the goals of that ideology. He may have accepted donations and/or voter support from special interests, such as corporations, and therefore must promote their agenda. Perhaps he had to cut a deal.

A politician with a hidden agenda must make the wrong priorities seem like the right ones in order to achieve what’s on the hidden agenda. How can he do this? For a corrupt politician such matters are child’s play—manipulate the public through false promises, create a false enemy, push the fear hot button hard and often, repeat the same lie over and over until it becomes “the truth,” and so forth.
The low priority that environmental sustainability receives from most governments today is rapidly becoming the textbook example of how devastating wrong priorities can be.

The ultimate wrong priority is the wrong societal goal. For example, the original goal of democracy in the United States was “life, liberty, and the pursuit of happiness.” That’s a quality of life goal. A similar goal was expressed in France’s Declaration of the Rights of Man and of the Citizen. But today society’s goal is maximization of short term profit. Proof lies in the daily stock market indexes found on the front page of many leading newspapers or business websites. Market indexes measure future anticipated profits. If the stock market goes up that’s good news. If it goes down it’s bad news. The implicit goal is everyone should do everything they can to make the market go up. But nowhere will you find a daily quality of life index or its equivalent. Society is marching to the beat of the wrong priority and the wrong drummer.

Wrong societal goals are the ultimate form of deception because once in place none of the other types of deception are needed anymore. The wrong goal is the new truth and any other viewpoint is by definition false.

Once the wrong goal is in place there’s no longer any need to lie because the lie is now the truth. That’s why George Orwell wrote in Nineteen Eighty-Four, Part Two, chapter 9, that:

All rulers in all ages have tried to impose a false view of the world upon their followers.

Deception Type 5: Secrecy

The fifth main type is actually a way to make the other four types of deception ten times as easy to achieve. Secrecy is hiding or withholding the truth. The power of secrecy comes from its ability to create a false impression without actually having to openly lie about anything. Secrecy makes it impossible to tell if a politician is lying because key premises cannot be tested. One type of secrecy is the sin of omission.

Secrecy is so important to the success of the first four types of deception that without it they would crumble into ineffective mumblings. But with secrecy they work most of the time, because there is no way for the population to tell if a politician is telling the truth or not. When you see a politician, administration, or party using much more secrecy than normal and there is no reasonable justification, you can be certain its purpose is deception.

How the types of deception are implemented

The five main types of political deception won’t work at all unless they can be implemented. The most common implementation technique is to rationalize why a
false promise is really true, why a false enemy is real, why there’s a bogeyman to fear, why the wrong priority is really the right priority, why secrecy is necessary when it’s really not, and so on. These techniques allow degenerates to rationalize why the goal of a special interest is the same as the public interest, and thereby deceive supporters into joining the Race to the Bottom.

A \textit{rationalization} is a falsehood supporting a pre-conceived conclusion. Clever rationalizations are usually the result of extensive testing and competition with other rationalizations, such as by testing on focus groups. All rationalizations employ well known fallacies to trick the receiver into believing a statement is true, when in fact it is false. A rationalization is a lie.

For example, the widely circulated argument that the Kyoto Protocol would not solve the climate change problem, and therefore is not worth supporting, is a clever rationalization. Of course it won’t solve it, because the first round of greenhouse gas emission reductions (averaging 5.2% below 1990 levels) are only a first step. Another popular rationalization is that mandatory emission limits would harm the US economy. It is true that GDP will probably fall as lower amounts of fossil fuels, cars, trucks, and so on are consumed. But the long term harm will be much greater if nothing was done. Yet another rationalization is why should the US support the treaty if China and India are exempt? The false answer is the US should not. But the true answer is the less developed countries will be included in later phases of the treaty. It makes little sense to include them in the early phases, because they are not a major source of emissions per capita, nor have they been a major source in the past.

There are many more ways to implement the five types of deception, such as biased framing, spin, false grassroots organizations, biased “public relations,” false news stories, the fallacy of “balanced news,” casting doubt on the severity or urgency of a problem, wedge issues, etc. When all this starts working smoothly the forces of reason are so smothered that a population can be manipulated in any desired direction. And it never felt the mosquito bite.

The right steady drumbeat of the five types of deception creates the ultimate political weapon: lies that work on entire nations. This weapon has littered the pages of history with these gems of dark wisdom:

\begin{quote}
Next the statesmen will invent cheap lies, putting the blame upon the nation that is attacked, and every man will be glad of those conscience-soothing falsities, and will diligently study them, and refuse to examine any refutations of them; and thus he will by and by convince himself that the war is just, and will thank God for the better sleep he enjoys after this process of grotesque self-deception. – Mark Twain, \textit{The Mysterious Stranger}, 1910.
\end{quote}

\begin{quote}
The whole aim of practical politics is to keep the populace alarmed (and hence clamorous to be led to safety) by menacing it with an endless series of

*A lie repeated often enough becomes the truth.* – Vladimir Lenin.

*It does not matter how many lies we tell, because once we have won, no one will be able to do anything about it.* – Statement by Dr. Joseph Goebbels to Adolf Hitler, early 1930s, from *The Rise and Fall of the Third Reich*, by William L. Shirer.

More modern history has given us this one:

*The Greatest Story Ever Sold: The Decline and Fall of Truth from 9/11 to Katrina* – This is the title of a 2006 book by Frank Rich. A review in the New York Times gives us a deeper look at Rich’s message: 40 *The truly cynical political operator, whether Republican or Democrat, could read this book as a manual for how to use deception, misinformation and propaganda to emasculate your enemies, subdue the news media and befuddle the public, and not as the call to arms for truth that Mr. Rich seeks to provide.*

It sounds like Machiavelli is alive and well, and working as a consultant to any government who agrees that *the ends justify the means*. Notice Rich’s intuitive realization that the “Fall of Truth” is the cause of the corruption problem currently haunting America (any many other nations) and that a “call to arms for the truth” is the cure. This leads to what Henry David Thoreau wrote in *A Week on the Concord and Merrimack Rivers*, in 1849:

*It takes two to speak the truth—one to speak, and another to hear.*

Which in turn leads to our own observation:

*It takes two to speak the lie—one to speak, and one to be deceived.*

**The two opposing loops**

Opposing the Race to the Bottom is the Race to the Top. The two loops are joined together as shown on the next page. Because each loop competes for the same Not Infected Neutralists, they are “Dueling Loops.”

In the Race to the Top virtuous politicians compete for supporters on the basis of the truth. (On the model this is called true memes.) No favoritism is used, because those who tell the truth treat everyone equitably. Virtuous politicians can help improve things so that society benefits as a whole, but they cannot promise or give anyone more than their fair share.
The Race to the Top works in a similar manner to the Race to the Bottom because the two loops are entirely symmetrical, with one crucial difference: in the Race to the Top, the size of the truth cannot be inflated. Corrupt politicians can use false meme size to inflate the appeal of what they offer their supporters. But virtuous politicians cannot use falsehood to promise more than they can honestly expect to deliver. Nor can they use favoritism to inflate expectations of how well they can help particular supporters.
Why exactly do virtuous politicians feel they cannot tell lies? The goal of virtuous politicians is to optimize the common good for all, which includes those who will follow us. The common good includes the rule of telling the truth, because the more you can assume a person is telling the truth, the more effectively you can cooperate. Effective cooperation is the foundation upon which all social contract societies are built. Because virtuous politicians feel compelled to tell the truth, they avoid lying. They are rationalists, who base their arguments on the truth about what will benefit the common good the most, as opposed to degenerates, who base their arguments on what will benefit special interests the most. Since that will not win a majority of voters, degenerates are forced to use deception to convince enough voters to support them. They have degenerated from the norm of trustworthy, truthful behavior.

Rationalists know that if they start telling lies their society will begin to crumble. Eventually it will degrade to life in mankind’s natural state (before that of a central government based on cooperation) where, as Thomas Hobbes put it, “the life of man” was “solitary, poor, nasty, brutish, and short.”

But degenerates feel no such constraint. Their goal is the uncommon good: the good of special interests. Instead of the rule of telling the truth, corrupt politicians follow the rule of expediency: do whatever it takes to maximize the good of the special interests supporting you. The end justifies the means. If a situation is best exploited by telling the truth, tell it. If it’s best exploited by a combination of truth and lies, then do that. This makes it impossible to trust corrupt politicians. But that doesn’t matter because if their deception is successful the public has no idea they are being exploited.

By examining how the basic dueling loops model behaves in a series of simulation runs, we can better understand why this political powerplace works the way it does. The table below lists the first six simulation runs we will examine. The first two variables (settings) are the changeable variables. By varying them from run to run we can try different scenarios. Each is a logical experiment. The third variable is a result variable. It is the outcome of a run after equilibrium is reached. Initial degenerate supporters equals 1 in all six runs.

<table>
<thead>
<tr>
<th>Two Opposing Loops Model Settings</th>
<th>Simulation Runs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial rationalist supporters</td>
<td>1 2 3 4 5 6</td>
</tr>
<tr>
<td>False meme size</td>
<td>0 1 5 1 1 1</td>
</tr>
<tr>
<td>Results</td>
<td>1 1 1 1.1 1.3 2</td>
</tr>
</tbody>
</table>

| Percent rationalists at end of run | 0% 50% 83% 20% 5% 0% |

Table 1
Run 1 – By setting initial rationalist supporters to zero and false meme size to 1, we get the equivalent of the Race to the Bottom loop and graph that was presented earlier on page 93.

Run 2 – In run 2 the number of initial rationalist supporters is increased to 1. Now both loops have the same number of initial supporters. Because neither loop has an advantage over the other loop, the result is both loops behave the same. Each attracts the same percentage of supporters.

This run exhibits the most basic behavior of the dueling loops, without the whistles and bells of giving one side an advantage. Notice how in this run the percentage of degenerates and rationalists are always the same, so the degenerates’ curve covers the rationalists’ curve. Both curves will be seen in later runs. Percent rationalists is the number of rationalists divided by degenerates plus rationalists. Naturally the higher this percentage is the better. In this run percent rationalists is always 50%.

Run 3 – In this run we increase initial rationalists to 5. This shows what happens if we give one side a head start on their number of supporters. Because we have not changed false meme size, neither size has an inherent advantage. But even a small head start, if all else is equal, can quickly become a large advantage, as the results show.
Run 4 – Now things get interesting. The number of initial rationalist supporters is set back to 1 and false meme size is increased from 1 to 1.1. This is only a tiny bit bigger, by 10%. It would seem that itsy bitsy lies and favors wouldn’t make much difference, but no—they make a huge difference over a long period of time. As the graph shows, the good guys get wiped out. After 500 years they are down to about 20%. After 5,000 years (not shown) they are down to 0.345879 persons, which in the real world would be zero.

Run 4 is an example of the Principle of Accumulated Advantage, also known as the Mathew Effect from the biblical parable in Matthew 25:29, “For to all those who have, more will be given, and they will have an abundance; but from those who have nothing, even what they have will be taken away.” The principle appears in the proverb “The rich get richer and the poor get poorer.” Run 4 show how when one side starts with a small advantage, if a reinforcing loop is present and there are no sufficiently strong balancing loops, the small advantage will grow into an overwhelming one.

This explains why “balancing” policies like progressive income taxes are necessary. If such policies don’t exist the reinforcing loop grows until one group has most or all of the advantage and the other group has little or none. This causes horrendous amounts of suffering. Eventually revolution is required to restore the balance that would optimize the common good.

In run 4 notice how slowly the lines for degenerates and rationalists diverged for the first 50 years. What might happen if the bad guys decided to tell bigger lies and give out bigger favors?

Run 5 – If false meme size is increased from 1.1 to 1.3, system behavior changes dramatically. It only takes about 30 years for the degenerates to pull away from the rationalists. Now the degenerate and rationalist lines flatten out after only 500 years, instead of the 5,000 years it took in run 4. The end result is the same. The lesson is that the bigger the lie, the faster a corrupt politician can take over a political
system. I wonder if that explains anything we might be seeing in politics today?

**Run 6** - Finally we see what happens if a corrupt politician decides to tell real whoppers. False meme size has increased to 2. In other words, every false promise, every false enemy, and so on is now twice as big as they really are.

The results are no surprise. Now the system responds so fast the good guys never even make much of an impact on politics. They are smothered so fast by such big lies that the graph line for rationalists is starting to look like a pancake. Now, after only 500 years, there are 0% rationalists left in the system. They have been exterminated.

There is a limit to how big a lie can grow before it starts to make detection easy. Later we will add the effect of size of lie on detection variable to the model, which will impose diminishing returns on the size of a lie.

These simulation runs show how the two loops are locked in a perpetual duel for the same Not Infected Neutralists. In addition, each politician has his or her own loop, and battles against other politicians for the same supporters. These many loops and the two main loops form the backbone of the structure of the modern political powerplace. The outstanding feature of this structure is:

**The inherent advantage of the Race to the Bottom**

Because the size of falsehood and favoritism can be inflated, and the truth cannot, the Race to the Bottom has an inherent structural advantage over the Race to the Top. This advantage remains hidden from all but the most analytical eye.

A politician can tell a bigger lie, like budget deficits don’t matter. But they cannot tell a bigger truth, such as I can balance the budget twice as well as my opponent, because once a budget is balanced, it cannot be balanced any better. From a mathematical perspective, the size (and hence the appeal) of a falsehood can be inflated by saying that $2 + 2 = 5$, or $7$, or even $27$, but the size of the truth can never be inflated by saying anything more than $2 + 2 = 4$.

The larger the “size” of a meme, the greater its average memetic infectivity. In the model a larger false meme has the effect of increasing the number of memes a person is exposed to per year. This is accomplished by assuming that a size of 2 equals 2 memes, etc. This greatly simplifies the model.
A false meme size of 1 equals one true meme. They have the same infectivity. This is because a meme size of 1 has not been inflated, so it’s true.

Now then, is it true that the greater the size of a meme, the greater the infectivity? Yes, up to a point of diminishing returns. For a lie that occurs when it is so obviously false it’s detected. The bigger the lie, the greater the infectivity, because the lies we are talking about here are the ones that are designed to gain supporters. The five main types of deception are false promise, false enemy, pushing the fear hot button, wrong priority and secrecy. The last really just increases the power of the other four.

Let’s examine an illustrative example. The first type of deception, a false promise, clearly has more appeal (infectivity) the bigger it is. For example, suppose you are going to pay a workforce 10 Euros an hour on payday. The virtuous politician would tell them exactly that, and he cannot tell them any different. The corrupt politician would make a false promise and say he will pay them 20 Euros an hour. Guess who is going to garner the most workers?

In the above example, a false promise of 20 Euros an hour is a false meme size of 2. A false promise of 200 Euros an hour would be a size of 20, which is so big it would be detected. The workers would not believe it because the offer is absurd. If you start reducing the false promise to 12 Euros an hour, the false meme size is 1.2. If you reduce it all the way to 10 Euros an hour the false meme size is 1, and its effect is the same as a true meme because it’s now the truth. The workers really will receive 10 Euros per hour when payday comes.

Let’s consider an example of the second type of deception, a false enemy. A true enemy might be a robber at your door with a knife. A false enemy, say 10% bigger, would have a machete. One 100% bigger might have a gun. One 300% bigger might be ten robbers, all with guns, and they have cut your phone line so you cannot call for help. Clearly the bigger the false enemy, the more motivational (infective) the lie, if you believe it’s true.

Notice how the size of the truth of a robber at your door with a knife cannot be inflated. There is nothing a truth teller can do to make that situation more motivational, without changing it. But if you lie, there is plenty you can do, without lifting a finger.

Getting closer to the ploys we see in politics, we could substitute a country for the robber and say it was about to attack your country. The bigger the false enemy, the more likely you would be to vote for the politician who has spotted it and can lead you out of harm’s way. This might be a choice between a virtuous politician who says the other country has only a conventional weapons army of one million soldiers, versus a corrupt politician who claims that’s not true. The other country really has nuclear bombs, in addition to the one million soldiers. If you as a citizen have no way to know who is telling the truth, then your chance of survival is maximized by preparing for the worst, by voting for the corrupt politician.
And so on for the other types of falsehoods.

Another way to explain this is lies allow corrupt politicians to offer larger expected payoffs than virtuous politicians. If you can’t tell the difference between the truth and a lie, and they are mutually exclusive, then there is a 50% chance each could be true. If one politician is offering you the equivalent of a 100 Euro payoff and the other a 200 Euro payoff, it’s a no brainer. You vote for the politician offering the larger payoff.

These examples should prove that false memes are more infective than true memes. The bigger the lie, the more infective it is, until it’s so big it’s detected. That’s why people lie. A glance at history will provide many supporting examples. Too many. Once you start thinking in terms of the Dueling Loops you will see evidence of Race to the Bottom or Top strategies everywhere, and not only in politics.

Because the size of falsehood and favoritism can be inflated and the truth cannot, corrupt politicians can attract more supporters for the same amount of effort. A corrupt politician can promise more, evoke false enemies more, push the fear hot bottom more, pursue wrong priorities more, and use more favoritism than a virtuous politician can. *The result is the Race to the Bottom is normally the dominant loop.* Thus the reason that “Power corrupts, and absolute power corrupts absolutely” is not so much that power itself corrupts, but that the surest means to power requires corruption. 42

Due to lack of an in-depth analysis of the fundamental causes of the change resistance part of the problem, problem solvers have long been intuitively attracted to the low leverage point of pushing on “more of the truth.” *On the model this point is the true memes node.* The truth is discovered by research on technical ways to live more sustainably, such as population control, alternatives to fossil fuels, and reduce, reuse, and recycle. The truth is then spread by scientific reports, popular articles, environmental magazines, lobbying, pilot projects, lawsuits to enforce the legal truth, demonstrations to shock the public into seeing the real truth, and so on. This works on problems with low change resistance, such as local pollution problems and conservation parks. But it fails on those with high change resistance, like climate change, because environmentalists simply do not have the force (wealth, numbers, and influence) necessary to make pushing on this point a viable solution.

Because of its overwhelming advantage, the Race to the Bottom is the surest way for a politician to *rise to* power, to *increase* his power, and to *stay* in power. But this is a Faustian bargain, because once a politician begins to use corruption to win, he joins an anything goes, the-end-justifies-the-means Race to the Bottom against other corrupt politicians. He can only run faster and keep winning the race by increasing his corruption. This is why the Race to the Bottom almost invariably runs to excess, and causes its own demise and collapse.

This collapse ends a cycle as old as the first two politicians. A cycle ends when corruption becomes so extreme and obvious that the people rise up, throw the bums
out, and become much harder to deceive for awhile. But as good times return, people become lax, and another cycle begins. These cycles never end because presently there is no mechanism in the human system to keep ability to detect deception permanently high.

The dueling loops structure offers a clear explanation of why environmentalists are facing such a hostile political climate. Strong opposition appears because a dominant Race to the Bottom causes corrupt politicians to work mostly for the selfish good of degenerate supporters, instead of working for the common good of the people. In other words:

**The Race to the Bottom Is Easily Exploited by Special Interests**

**Exploitation** is the use of others to increase your own competitive advantage, at the cost of theirs. Because this is so obviously self-destructive to those being exploited, deception is required to pull it off. (We are considering only voluntary exploitation and not cases like slavery.)

The Race to the Bottom provides the perfect mechanism for political exploitation, via election support of some type in return for favors. A little of this goes a long way, because each politician has his or her own loop. There are also hierarchies of loops, since a politician’s supporters can be other politicians. At the top of each hierarchy is the top politician, such as a president, political strategist, or party. Whoever is at the top has tremendous leverage. *Thus the Race to the Bottom greatly amplifies the power of the exploiter.*

In stark contrast, the Race to the Top cannot be exploited. Unseemly rewards cannot flow to a truth telling politician without everyone knowing about it, because part of telling the truth is keeping no secrets and not committing the “sin of omission,” a type of lie. Nor can the Race to the Top be exploited by supporters or outsiders with bribes or favoritism, because truth telling politicians would say no and if necessary report them. If they didn’t, they would lose supporters because they would be committing falsehood.

Basically the Race to the Top is not exploitable because exploitation requires unjustified support, which is what the Race to the Bottom thrives on. But in the Race to the Top, all support is justified because it is based on the truth and the equitable distribution of the benefits of social cooperation.

The incentive to exploit occurs when a special interest group has interests that conflict with those of society as a whole. Common examples are religious fundamentalists, the rich, the military, and large for-profit corporations. The latter two (or is it really the latter three?) make up the infamous military industrial complex.

A corrupt politician, by accepting donations (legal bribes) and votes in return for favoritism, becomes beholden to the special interest groups involved. If a special interest is powerful enough it can control and exploit a political system by clever use of the Race to the Bottom. That’s exactly what’s happening today. The global politi-
The high leverage point that has not yet been tried

We have extremely good news. There is a very promising high leverage point in the human system that has not yet been tried. It is general ability to detect political deception, as shown on the revised model on the next page. Pushing there appears to give problem solvers the greatest possible chance of solving the social side of the problem, where change resistance lies.

Actually the model identifies not one but two high leverage points. Both need their present values raised to solve the problem. But as we will show in another series of simulation runs, the high leverage point of general ability to detect political deception makes the biggest difference.

The central purpose of this chapter is to convey the importance of two propositions: that The Dueling Loops of the Political Powerplace model explains why environmentalists are meeting such stiff resistance, and what the high leverage points appear to be. If we can do that, it will not be long before readers of this book explore these propositions for themselves, launch their own analyses, and begin pushing on high leverage points. Those points may or may not be the ones presented here, because this analysis is merely a first iteration.

On the model a solid arrow indicates a direct relationship. The two dashed arrows show an inverse relationship. A dotted arrow is a constant or a lookup table function.

Currently general ability to detect political deception is low. The lower it is the lower detected false memes are. The lower that is, the higher undetected false memes are and the lower repulsion memes are. This causes more degenerates and fewer rationalists, which is bad news.

Currently repulsion to corruption is also low. The lower it is, the lower the rationalists infectivity rate and the lower supporter desertion due to repulsion. This is because repulsion to corruption times detected false memes equals repulsion memes. This makes sense, because detected corruption is a good reason to decide to support virtuous politicians and to desert corrupt ones.

For a system to react to deception, two steps must take place. The deception must be detected, which is handled by general ability to detect political deception times false memes equals detected false memes. Then those detected false memes must cause people to be repulsed enough by the corruption to either defect from the degenerates, which is what the supporter desertion due to repulsion variable does, or to become rationalists, which is handled by adding repulsion memes to true memes.
to calculate the rationalists infectivity rate. In addition to this, false memes minus detected false memes equals undetected false memes, which reduces degenerate infectivity.

Let’s summarize how the **You Can’t Fool All of the People All of the Time** loop works, focusing on the higher leverage point. Currently the loop is weak, and thus might be more appropriately named **You Can Fool Most of the Peo-**
ple Most of the Time. The level of ability to detect deception, the size of false memes, and the effect of the size of a lie on detection determine the amount of detected false memes. Thus when ability to detect deception is low corruption works like a charm because most false memes flow through the system unimpeded. This causes undetected false memes to be high and detected false memes to be low, which strongly favors the Race to the Bottom.

But if problem solvers can raise ability to detect deception to a high level, most false memes flow to detected false memes. This greatly decreases undetected false memes, which destroys the power of the Race to the Bottom because that’s what allows successful change resistance. At the same time this increases repulsion memes, which increases the rationalists infectivity rate and increases the degenerates recovery rate due to supporter desertion due to repulsion. The result is corruption doesn’t work anymore, which causes the Race to the Bottom to collapse as most people suddenly see the real truth and flee for their lives to the stock of Supporters Due to Rationality. This is precisely what happens when massive amounts of corruption are suddenly exposed.

It is the effect of influencing so much so strongly that makes general ability to detect political deception such a potent high leverage point.

Next let’s familiarize ourselves with how pushing on the two high leverage points affects model behavior. The table below lists the simulation runs needed to do this. In these runs the number of initial degenerate and rationalist supporters is 1.

<table>
<thead>
<tr>
<th>Two HLPs Model Settings</th>
<th>Simulation Runs</th>
<th>Table 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
<td>8</td>
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<tr>
<td>False meme size</td>
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<td>1</td>
</tr>
<tr>
<td>Ability to detect deception</td>
<td>0%</td>
<td>20%</td>
</tr>
<tr>
<td>Repulsion to corruption</td>
<td>NA</td>
<td>0%</td>
</tr>
<tr>
<td>Results</td>
<td>50%</td>
<td>98%</td>
</tr>
</tbody>
</table>
Run 7 – This is the same as run 2 presented earlier. The purpose of this run is to test that the revised model has the same foundational behavior. It also serves as a good starting point for further scenarios.

Run 8 – In the United States and many other countries, the general ability to detect political deception is low, somewhere around 20% or 30%. This is obvious because of the large amount of political corruption that goes undetected. Let’s try raising this high leverage point from 0% to 20% and see what happens.

Wow! Great results! Finally it’s the bad guys whose graph line is flattened like a pancake. Percent rationalists rises to 75% in 100 years and levels out at 98%. This is a dream scenario. All we’ve got to do is figure out how to make it happen.

Unfortunately that can’t be done, because this scenario is unrealistic. There is no way corrupt politicians are going to sit by and stick to a false meme size of 1, when they know full well, from at least 200,000 years of experience, that corruption works. So let’s fix that in the next run.

Run 9 – The bad guys may be corrupt, but they are not dumb. They are usually plenty clever enough to adjust the size of lies and favoritism to be close to the right amount: not too big, and not too small. Those corrupt politicians that cannot do this will be selected out by the iron hand of evolution’s most merciless law: survival of the fittest.

To reflect the above reasoning, in this run we change false meme size from 1 to 4.8, which is the optimum that effect of size of lie on detection and supporter desertion due to repulsion will let the bad guys get away with.
The graph tells the sad story. Now it is the good guys are as flat as a pancake after a *Tyrannosaurus Conservatex* stepped on it. In this scenario the rationalists have lost the game so soon and so badly it’s as if they had hardly any influence at all on the political system. But once again, is this a realistic simulation run? Not quite, because repulsion is still 0%, which is unrealistically low. Let’s do another run and experiment to see what happens when we increase it.

**Run 10** – Now we push on the second high leverage point, repulsion to corruption, raising it from 0% to 20%. Because both high leverage points are now being pushed, things should start looking more favorable. If they don’t, our understanding of the model is faulty.

The results look better but they’re still not good enough. Percent rationalists tops out at 41%, which is well below what’s needed for a political system to run itself well. We’ve got to do better.

**Run 11** – The smarter the agent, the faster and better it adapts to changing circumstances. We can only assume that degenerate politicians will adapt their strategy to the new circumstances of run 10. Experimentation with the model shows that the optimum false meme size for a 20% ability to detect deception and a 20% repulsion factor is 2.4. So in this run let’s change false meme size to 2.4.

The results show this strategy has a substantially better outcome for the degenerates. Percent rationalists levels off at 20% instead of the 41% of run 10. In other words, the degenerates have increased their percentage...
from 59% to 80%. Not bad for such a simple change. What’s interesting is they did it by decreasing the size of lies and favoritism, which means less corruption earned them more supporters.

The point is that false meme size is not fixed. It is fluid and, like so many agent strategies in complex social systems, changes as the situation demands.

**Run 12** – Next let’s see which of the two high leverage points gives problem solvers the most leverage. First let’s raise repulsion to corruption from low to high, which is from 20% to 80%. Then we experiment with the running model to determine the optimum false meme size is for this competitive situation. It turns out to still be 2.4. Will the result be good enough for the good guys to win or not?

Actually the model is now so complex I found it hard to reliably predict the outcome of this run. But that’s one of the many benefits of simulation modeling: Once you have expressed your analysis as a dynamic structure, the software takes it from there and tells you how that structure will behave in any situation. And unlike my poor overworked cranial lobes, simulation software never makes a mistake.

The results show that even 80% is still not good enough. The forces of truth and corruption are still so evenly matched that they would be totally unable to deal cooperatively and proactively with difficult problems like the global environmental sustainability problem, because they would be too busy battling each other. The degenerates would also be engaging in promoting too many wrong priorities for the right priority of environmental sustainability to emerge as a top priority.

Time for a sanity check. Does this result make sense? Yes, because ability to detect deception is still low, at 20%. So let’s roll back repulsion to a more realistic value and then see what would happen if we raised ability to detect deception.

**Run 13** – First we must estimate a reasonable value for repulsion to corruption. Later we hope to measure it in the field, but for now we must rely on an estimate.

There are five ballpark values repulsion to corruption could be: zero, low, medium, high, and 100%. Zero and 100% are so extreme as to be unrealistic, so we will rule them out.

I feel that presently repulsion to corruption is low. When the average citizen hears about detected corruption they do very little. They do not take action. Instead, the incident is written off as “politics as usual.” Only if corruption is extreme and prolonged do they take effective action. Even when Election Day comes, it is not
corruption that voters consider the most. It is numerous other factors, like looks, charisma, sound bytes that stick in the mind, and most importantly, where the candidate stands on issues that are important to each voter. These issues rarely center on corruption, unless corruption has been prolonged and extreme.

Let’s not go too low, like 10%. A value of 20% seems reasonable. Much higher would slip into a medium level (40% to 60%), which does not make sense. People do not act on half the corruption they hear about. It is much less.

Also let’s start to raise ability to detect deception. In runs 8 to 12 it was 20%. Let’s raise it to 60%. Let’s continue to assume corrupt politicians will adapt to the new situation and change to the optimum strategy of 3.8 for false meme size.

The results show that to adequately counter a false meme size of 3.8, ability to detect deception must be at least 60% and repulsion at least 20%. Percent rationalists is now up to 69%, which is probably about the bare minimum for a government to begin to put aside political squabbling and begin to work on its backlog of problems. But 69% is still not high enough for nations to focus efficiently on highly demanding problems, because solving these types of problems requires a nation’s full attention and its complete cooperation with other nations.

**Run 14** – To see if we can achieve a high enough percent rationalists to solve the problem, let’s raise ability to detect deception from 60% to 80%. Again we assume adaptation and change false memes size to 4.7.

The graph shows that at last we have the behavior in the model we would like to see in the real world, because percent rationalists has risen to a blissful 100%. The opposition is eliminated and virtuous politicians can now focus on society’s proper priorities, at last. *If the model is correct*, then raising the general ability to detect political deception from low to high is all it takes to make the Race to the Top go dominant and thus solve the change resistance part of the problem.
Notice how this run was able to raise percent rationalists from 41% to 100% (a 59% rise) by raising ability to detect deception from 20% to 80%, while run 12 only raised percent rationalists from 41% to 57% (a 16% rise) by raising repulsion from 20% to 80%. Calculating the leverage, 59% / 16% = 3.7. Thus in these fairly realistic scenarios ability to detect deception has 370% more leverage than repulsion to corruption has.

Comments on these runs

What about leaving ability to detect deception at 60% and raising repulsion to corruption? Would that solve the problem? No. Experimentation with the model shows that increasing repulsion to 80% increases percent rationalists to 94%, and increasing it to 100% only increases percent rationalists to 95%. It seems that increasing repulsion cannot eliminate the last few degenerates. However it does appear that the best overall solution is to raise both high leverage points some: repulsion a little bit, and ability to detect deception a lot.

Now for the important question: Is the model correct? No one knows, because it has not yet been subjected to the rigors of experimental proof and field calibration. But I do believe that it contains the fundamental brushstrokes explaining why solution adoption resistance is so high. At the very least the model should be able to serve as the starting point for a larger project that would go much further than I’ve been able to go by myself.

Next we need to take up the notion that the dueling loops are cyclic. However, a word of caution

At Thwink.org, as well as in this book, we think like scientists. Every assertion we make is a hypothesis that could be overturned tomorrow. The pages you are reading contain many novel hypotheses. While these seem to have withstood the test of logical proof, using a number of analytical tools, few have undergone the acid test of real world experimentation. No one knows how many will survive. But rather than couch every assertion with a “maybe,” “this suggests,” or a “probably,” and so on, we have elected to only occasionally stress that all the conclusions in the book are merely examples and pointers to a new way of thwinking. None should be interpreted as the analysis or the solution.

The cyclic behavior of the Dueling Loops

Up until now the model has ignored consideration of what it is that causes a society to want to raise its general ability to detect political deception and/or repulsion to corruption. To raise the values for these two variables in our simulation runs, all
we had to do was reach into the model and change them. That’s not how it happens in the real world. How then do societies adjust these values?

My hypothesis is that societies reactively change these values when they see the clear and present need to change them. This need appears when a prolonged excess of corruption occurs. Because there is no formal reliable mechanism to keep the values of these two variables permanently high, they tend to fluctuate as the decades pass. Another way to say this is societies have a short organizational memory on what the values of these two variables should be.

Reactively changing these values causes an endless cycle. This cycle was briefly described earlier as: A cycle ends when corruption becomes so extreme and obvious that the people rise up, throw the bums out, and become much harder to deceive for awhile. But as good times return, people become lax, and another cycle begins. These cycles never end, because presently there is no mechanism in the human system to keep ability to detect deception permanently high.

The minimum conditions required for the dueling loops to be cyclic appear to be:

1. The natural tendency for general ability to detect political deception and repulsion to corruption to be low.

2. The existence of critical points that are automatically activated when corruption gets bad enough. Once a critical point is activated, society invests in raising general ability to detect political deception and/or repulsion to corruption.

3. The critical point is deactivated once corruption falls low enough. This is because there is no permanent mechanism to keep these variables high enough to prevent corruption. (Maxims like “The price of democracy is eternal vigilance” intuitively recognize the need for a permanent mechanism, but even 1,000 such maxims are not enough. Something more is needed.)

4. The presence of delays in raising and lowering the two variables, and in changing supporters of one type into the other.

The previous model has been revised to incorporate these minimum conditions by renaming the key high leverage point to be Ability to Detect Deception and changing it to a stock instead of a variable. (It is traditional to capitalize the names of stocks, due to their central importance in stock and flow models.) The Critical Point Reaction Subsystem, shown on the next page, was then built around this stock to give it a realistic critical point and change delay.

In the model 1 – percent rationalists = corruption. The critical point reaction occurs when corruption rises above a certain arbitrary cultural corruption critical point.
Here’s how a **We Won’t Tolerate Corruption** (for awhile) cycle works: Once corruption rises above the corruption critical point a common complex social system reaction occurs. The reaction to excessive corruption activated node goes from false to true, after a reaction delay of 5 years. This causes normal activation investment rate to become the additional cultural investment rate. Because that is 20 times as large as the normal cultural investment rate, the reaction vastly increases a society’s investment in raising Ability to Detect Deception, such as by launching investigations, publishing information on who is corrupt, prosecuting corrupt officials, and changing the processes of its governmental institutions to be more corruption proof. This takes time, as represented by the investment delay of 5 years and by the way it takes many years to fill the stock up to the high level needed to detect most corruption.

As the stock of Ability to Detect Deception investments accumulates, more and more false memes are detected. Once the stock rises high enough, so much falsehood and favoritism is detected that corruption falls so low that the corruption critical point is no longer exceeded. This causes reaction to excessive corruption activated to change back to false, which causes additional cultural investment to change back to zero, which causes the stock of Ability to Detect Deception to start falling. It contin-
ues to fall until it goes so low that another critical point reaction is triggered, and the cycle starts over again.

Below is the table of simulation runs needed to illustrate the dynamic behavior of the critical point model. In all runs repulsion to corruption is 20%. In a real solution it probably needs to be increased a bit, but here we leave it alone for simplicity.

<table>
<thead>
<tr>
<th>Critical Point Model Settings</th>
<th>Simulation Runs</th>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>Corruption critical point</td>
<td>100%</td>
<td>65%</td>
</tr>
<tr>
<td>False meme size</td>
<td>2.4</td>
<td>2.4</td>
</tr>
</tbody>
</table>

| Results                       |                  |         |         |         |         |         |         |
| Percent rationalists          | 20%              | Very    | cyclic  | 40%     | Less    | cyclic  | 55%     | A little cyclic |
|                               |                  | Barely  | cyclic  | 100%    |         |         |         | Barely cyclic |

**Run 15** – This run has no critical point reaction since the corruption critical point equals 100%. That’s so high it can never be exceeded. Thus this run’s behavior is identical to run 11 because additional investment has not yet been triggered.

The subsystem has a normal cultural investment rate that keeps Ability to Detect Deception at 20% when additional investment is zero. Run 15 is the reference mode for the critical point model. In the graph percent rationalists has been replaced by Ability to Detect Deception, which in this run is a constant 20%.

It takes this run only a hundred years to reach steady state equilibrium. To show the cyclic nature of the dueling loops in later runs, the reaction start year is set to 1900. Starting the reaction then instead of in 2000 (which would be about now, and make the modeling experience a little more true to life) gives us more cyclic activity to look at, so that we can more clearly understand the model and its implications.
Run 16 – This is the basic problem to solve. In this run the critical point is lowered from 100% to 65%, which means the critical point reaction will take place whenever corruption rises above 65% or percent rationalists dips below 35%. Since in the reaction start year of 1900 percent rationalists equals 20%, the critical point reaction starts then. The simulation results show such insightful social system behavior that we’ve enlarged the graph for this run so the details may be more easily seen.

The graph shows the cycles are about 200 years long. This is much longer than the corruption cycles (really exploitation cycles) we see today. Thus it is more representative of the deeper cycles that occur, such as those due to changes in styles of government, which are a reaction to very deep social system drivers like class oppression by a landed aristocracy or a hereditary line of rulers. If the four delays in the model are reduced to low levels, cycle length falls to about 75 years, which is closer to what we see in cyclic political party dominance or exploitation by life forms or special interest groups like the modern corporation, due to corruption and other related factors that tend to obscure the fact that exploitation of the Race to the Bottom is the central driver of these cycles. (75 years requires investment delay = 1 year instead of 5, reaction delay = 1 year instead of 5, incubation time = 1 year instead of 10, and infection lifetime = 5 years instead of 20.)

For example, the modern corporation became ruthlessly dominant in the US in the late 19th century. The cycle was ended with a backlash against the oppressive power of corporations that led to passage of legislation like the Sherman Anti-Trust Act of 1890. But now corporations are overly dominant again, due to successful exploitation of the Race to the Bottom.

The important thing to realize is that the natural tendency of the dueling loops is to be cyclic. The length of the cycles varies greatly depending on a host of factors, only a few of which are incorporated in the model. Because there are many corrupt politicians and special interest groups trying to exploit the Race to the Bottom, there are many cycles underway at the same time. A political system will be most domi-
nated by whichever cycles are currently dominant and by how strong and clever the various exploiters are.

Let’s walk through a cycle and explain what’s happening, both in the model and the real world it attempts to represent.

A cycle begins when percent rationalists falls below the corruption critical point. Then, after a reaction delay of 5 years we see that Ability to Detect Deception suddenly spikes upward. These spikes are mass panic reactions to flagrant amounts of corruption. When a spike is underway a society will be wildly investing in all sorts of things to increase the public’s ability to spot political deception, like editorials and articles explaining how certain politicians are using lies and favoritism to achieve their nefarious goals, investigations to get to the bottom of various scandals and root out corrupt politicians, speeches extolling the importance of virtue and the ravaging effects of corruption, and so forth. Mechanisms to detect falsehood will start spontaneously appearing, such as the way FactCheck.org appeared in the 2004 election and PolitiFact.com in 2007, both in the US.

The incubation time of 10 years and other delays causes the percentage of degenerates to not fall as fast or as soon as Ability to Detect Deception spikes upward. Instead, there is a noticeable lag. While it takes only about 25 years for Ability to Detect Deception to reach its peak, it takes about 70 and 80 years for the percentage of degenerates to fall to its lowest level and for the rationalists to reach their peak. These excruciatingly long delays do occur, because it normally takes generations for fundamental cultural norms, like ideology allegiance or addiction to consumptive extravagance, to shift radically.

Once a critical point reaction occurs, eventually the degenerates fall out of power, the rationalists come into power, and a society enters good times. Those times are so good and what is allowing them is so well hidden that without realizing it society “forgets” that it should be investing in keeping the Ability to Detect Deception high. The result of this oversight is that very early in the cycle the level of detection ability starts to fall. In this run it starts to fall after only about 25 years, which is 1/8 of the cycle’s length. It continues to fall, though the rate of fall slows down as it approaches its normal level of 20%.

In the graph the good times begin when supporter type crossover occurs after about 35 years. After this the rationalists are dominant. This lasts for about half the cycle’s length, and then crossover occurs again as the degenerates become dominant. As the percentage of degenerates continues to increase, it eventually triggers another critical point reaction and the cycle starts all over again.

Note that after 1900 the percentage of neutralists stays within a range of 17% to 29%. This corresponds to the roughly 10% to 30% of the population who are the so called “swing voters.” These voters are not strongly committed to either side. If the percentage of rationalists is close to the percentage of degenerates in a political sys-
tem, as it so often is, then it is the neutralists who determine election outcomes. This fact has not escaped the attention of election strategists.

**Run 17** – In the first draft of this model write up I completely missed the fact there’s a very successful strategy the degenerates can employ to totally overcome what the rationalists did in run 16. It was only due to correcting a modeling error that I noticed that the wily degenerates have an ace up their sleeve.

Once the cyclic behavior of run 16 begins, the degenerates are dominant a little less than half the time. Thus they are losing. But as the run 17 graph shows, they can win by “losing” even more! This is done by increasing false meme size from 2.4 to 4.7 so as to get caught red handed even more. This causes the pre 1900 portion of the run to level out at 40% instead of the 20% percent rationalists that we saw in run 15. The amazing result is the critical point of 65% is never triggered, the cyclic behavior never happens, and the degenerates, instead of being dominant less than half the time as in run 16, now stay at 60% dominance! How’s that for craftiness?

In other words, at a 65% critical point corrupt politicians can win big by telling whoppers they know are going to be detected and cause them to lose more supporters. This corresponds to the flagrant, braggadocio style of lie spinning and cash for favors we sometimes see corrupt politicians or political parties engaging in. There seems to be no logical reason they would try to get caught. But from the viewpoint of the model, there is a perfectly sane reason for such insane behavior: it is the winning strategy. *Figuring out why baffling social behaviors like this occur is impossible without building simulation models like this one.*

**Run 18** – It looks like our friends, the virtuous politicians, have no choice but to try a higher critical point. Let’s hold false meme size at 4.7 and lower the critical point to 50%.

Once again we have cyclic behavior, though it is a little less so than in run 16. This time the degenerates are dominant only about 10% of the time.
This run begs the intuitive question, if Ability to Detect Deception is 50%, then why aren’t the rationalists and degenerates each dominant about 50% of the time? The answer is they would be, if repulsion to corruption was 0% instead of 20%. But 0% is unrealistic, because some people do take effective action when they detect corruption, so we have used the value of 20%.

We must not forget for a moment the cleverness of those who believe the end justifies the means. Is there a winning strategy the degenerates can use to counter a critical point of 50%?

**Run 19** – Yes there is. Telling even bigger whoppers works like a charm once again. A false meme size of 5.6 allows the degenerates to do much better than being dominant 10% of the time, as in run 18. The results show they don’t do quite as well as run 18, because now they are in the minority. But they have achieved a dominance of 45%, which is definitely enough to achieve many of their goals, not to mention the sizable impact such a large minority would have on political decision making.

**Run 20** – The rationalists need to do much better. Let’s get serious and lower the critical point all the way to 30%. Surely this will do the job. At least I hope it does, because raising Ability to Detect Deception even higher is not going to be easy.

The results of this experiment are much better, as expected. For the first time the rationalists are safely in control of the political system all the time, by a very comfortable margin. There is still a little cyclic behavior, but now the forces of reason are never seriously challenged. The rationalists average about 60% of the population and the degenerates average about 20%.

Once again, is there a strategy the degenerates can use to do better? No. At least not the way this model is constructed. A false meme size of 6.7 does avoid triggering the critical point reaction but the degenerates average only the same percent dominance. That strategy does not give a better outcome. In this run their best strategy is
to maximize their cyclic dominance and use the chaos that causes to try for a lucky victory, which requires adapting to an optimal false meme size of about 4. Thus an important conclusion we can draw from the model is that a high level of Ability to Detect Deception is required to successfully counter the extraordinary power of the Race to the Bottom.

We are not yet done. Looking at the graph closely, this run is still not good enough because even a 20% minority, with occasional swings to over 25%, can still upset the applecart. In modern democracies every sizable minority still has a voice that must be listened to and frequently accommodated. Thus if a society was trying to deal with a problem so large and difficult that it required all of that society’s or a planet’s attention to solve it, a 20% minority could prevent that.

So how high does the critical point have to go to solve the problem? That is, how strong does a society’s organizational memory have to be for it to always remember how to prevent excess corruption? Let’s continue experimenting to find out by lowering the critical point again, this time to 5%. The optimal false meme size of 4 remains the same.

**Run 21** – The cyclic behavior is now almost completely gone. But some still exists and there are still a few degenerates to be reckoned with. Is a critical point of 5% good enough to solve problems as intractable as the global environmental sustainability problem?

I think not, for several reasons. One is that as long as some cyclic spikes exist in a social system, it is too easy for those signals to obscure other signals and thus add to the complexity of any problems a society may be trying to solve. Ability to Detect Deception spikes are not just another signal—they lay at the very heart of human systems, because they are attempts to adjust the perceptual acuity of self-governance. That acuity needs to be at least 20/20 to be able to see the true facts of the many complex, difficult problems governments are responsible for solving. Thus spike signals due to rising degeneration must be responded to in a serious manner, because they may indicate problems of great importance. In addition to the signal confusion problem, spikes in Ability to Detect Deception investment siphon investment away from other endeavors.

There is, however, an even greater reason that a corruption critical point of 5% is not good enough. I believe you can see for yourself what that reason is, from this
article that appeared the day after I first wrote this. Only the first half of the article is quoted since the rest adds very little to the article’s basic argument. (Italics added)


They succeeded. The Kyoto Protocol was ultimately ratified by 156 countries. It was the first agreement of its kind. But it may also prove to be the last.

Today, in the middle of new global warming talks in Montreal, there is a sense that the whole idea of global agreements to cut greenhouse gases won't work. A major reason the optimism over Kyoto has eroded so rapidly is that its major requirement - that 38 participating industrialized countries cut their greenhouse emissions below 1990 levels by the year 2012 - was seen as just a first step toward increasingly aggressive cuts.

But in the years after the protocol was announced, developing countries, including the fast-growing giants China and India, have held firm on their insistence that they would accept no emissions cuts, even though they are likely to be the world's dominant source of greenhouse gases in coming years. Their refusal helped fuel strong opposition to the treaty in the United States Senate and its eventual rejection by President Bush.

But the current stalemate is not just because of the inadequacies of the protocol. It is also a response to the world's ballooning energy appetite, which, largely because of economic growth in China, has exceeded almost everyone's expectations. And there are still no viable alternatives to fossil fuels, the main source of greenhouse gases.

Then, too, there is a growing recognition of the economic costs incurred by signing on to the Kyoto Protocol. As Prime Minister Tony Blair of Britain, a proponent of emissions targets, said in a statement on Nov. 1: “The blunt truth about the politics of climate change is that no country will want to sacrifice its economy in order to meet this challenge.”

The message I glean from this article is that the solution adoption resistance part of the problem has reached the stage where it is no longer just difficult—it may now be impossible to solve in time. This is because, as shown in Tony Blair’s statement, most of the world is trapped in an Economic Race to the Bottom among Nations and doesn’t know how to get out. But guess what life form benefits most from that particular downward spiral and therefore has caused it to happen? And guess what high leverage point must be pushed extraordinarily well to stop that downward spiral in its tracks?
Subproblem A – How to Overcome Change Resistance

The problem is now so close to the threshold of insolvability (or past it, we really don’t know) that society no longer has the luxury of tolerating any corruption, because that hinders solving the problem and could tip it over the threshold.

One solution alternative is to wait until the first “wake up call” environmental catastrophes start to occur, and then use the belated global realization that humanity must solve the problem to move forward on a solution. But if we wait that long, Humpty Dumpty will have already fallen off the wall and it will not be possible to put all of the pieces back together again.

The case can be made that as percent degenerates approaches zero, a multiplier effect is at work. These last few percent are the desperate, hard core degenerates, which includes the smartest of the lot. As percent degenerates goes low, every special interest degenerate ties up two or more for-the-good-of-all rationalists, because (under present conditions) that’s how many people it takes to handle damage control and counter the insidious, endlessly disruptive stream of falsehood and favoritism.

Therefore a rule of zero tolerance to political corruption must be adopted, so that *Homo sapiens* is not distracted while it attempts to save itself from ecocide. Anything less is just asking for trouble when it comes to figuring out how to get the US, China, India, and the entire world on board a rapid and radical solution to the climate change problem, as well as to other global environmental problems such as topsoil loss, deforestation, and groundwater depletion.

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**Why the International Stalemate Exists**

[Diagram showing the cycle of economic race to the bottom among nations, environmental degradation, and inter-country economic advantage with delays and short term economic gain and long term economic loss]

What Tony Blair was really saying is no country can afford to “sacrifice its economy” to get out of the above race to the bottom. This is because the New Dominant Life Form has structured the international commerce game so that nations see the main loop before the side loop. The way out is to raise ability to detect deception at the level of nations, so that they can break free of the illusion that they are trapped in the main loop, and can see the truth: that the *Pay the Piper Later* side loop is the more important loop to their citizens.

The main loop starts when a country makes a commitment to economic growth at the expense of the environment. This increases environmental degradation, which in turn raises the short term economic gain, which increases that nation’s inter-country economic advantage, and the loop starts all over again, because that is A Good Thing. The side loop shows how, if the delay of environmental degradation is considered, then there is a long term economic loss that will eventually decrease the inter-country economic advantage, arguably by much more than the short term economic gain.
Let’s take a look at what would happen if we tried the rule of zero tolerance in the final simulation run by using a critical point of 0%.

**Run 22** – As expected, *zero tolerance to corruption completely ends the cyclic behavior of the dueling loops*. Once the rationalists rise to dominance they stay there. Degenerates do not just drop to a low level—they are reduced to 0%. Their best strategy is to hold out as long as possible, by using a *false meme size* of 4.7. After about 50 years, society’s *Ability to Detect Deception* holds steady at 80%. A successful transition to solving the solution adoption resistance part of the problem has occurred.

But this transition takes a long time. It takes about 25 years for rationalists to begin to outnumber degenerates, and 40 years for *percent rationalists* to rise to 69% (barely over a 2 to 1 majority), which was mentioned in run 13 as probably the bare minimum it will take to make a serious start on solving the problem, though it is still too low to be enough. As we argued in run 21, it will take somewhere near 100% to be enough.

Because the model is not calibrated (the numbers used in it are estimated, not measured), it cannot make accurate predictions. Nevertheless, it does look as if solving the solution adoption resistance part of the problem will take a long time. Will it take too long? That is one of the great questions facing problem solvers and civilization.

**Key findings from the Dueling Loops**

Simplifying enormously, most conventional wisdom says all we need to do to solve the sustainability problem is to find the proper practices needed to live sustainably and then aggressively promote those practices until they are adopted. This approach has tremendous logical and technical appeal. The inner talk runs about like this: “Solving this problem is basically a matter of finding out what’s best for the good of all, and then spreading that knowledge. Once people and governments see what’s in their own best interests, they will start doing things that way, because people are rational.”

There is, however, a slight drawback to this approach. It doesn’t work.

This is because it completely misses the change resistance part of the problem, and fails to see the hidden causal structure causing of decades of solution failure. If problem solvers would focus their efforts on why so much change resistance is oc-
curring they might find, as this analysis has, that all they’ve been doing is engaging in “more of the truth.” This is a low leverage point. *Pushing on this point fails because it is no more than a heavy handed, naive attempt to make the Race to the Top dominant through the application of brute force.* It does not consider that the Race to the Bottom is inherently stronger and has a more powerful special interest group behind it. Thus conventional approaches have no hope of succeeding, unless the laws of physics change or a “wakeup call catastrophe” occurs in time. Neither appears likely.

Fortunately there is at least one way out. It is the high leverage point of general ability to detect political deception. Currently this is low. If problem solvers can raise it to a high level the Race to the Bottom will collapse, leaving the Race to the Top dominant. Politicians will then respond correctly to the truth about the global environmental sustainability problem because it will now be in their best interests. If they come to the same conclusion that environmentalists have, that sustainability is civilization’s top priority and nothing else comes close, then civilization will at long last begin the Sustainability Revolution.

One way to summarize the Dueling Loops model is that democracy doesn’t work if citizens cannot tell the difference between a good and a bad politician.
The five substeps of analysis

The Dueling Loops model was built by methodically walking through SIP’s five substeps of analysis. The model explains so much it serves as a rich source of explanation for subproblems A, B, and C. The rest of this chapter applies the model to just subproblem A. Substep results are summarized in subproblem A in the Summary of Analysis Results on page 87.

The symptoms of the change resistance subproblem are *Successful opposition to passing proposed laws for solving the sustainability problem.*

Substep A. Find the immediate cause of the problem symptoms in terms of the system’s dominant feedback loops.

The basic Dueling Loops model on page 109 shows the immediate cause is **The Race to the Bottom among Politicians** is dominant most of the time. The more dominant that loop is, the more deception transmitted to Not Infected Neutralists. These are swing voters and recently disenchanted degenerates or rationalists. The Race to the Bottom amplifies degenerates influence with false memes. Because the size of a falsehood can be inflated but the size of the truth cannot, the Race to the Bottom wins more supporters from the pool of Not Infected Neutralists than the Race to the Top does. The result is degenerate supporters elect corrupt politicians, who because they are in the majority, successfully oppose attempts to solve the sustainability problem.

Note the stark contrast between this conclusion and the norm. Conventional reasons for failure to overcome change resistance are things like lack of political will, this is a hard problem, human greed, not enough activists, wrong framing of the issues, and so on. These opinions, while sincere, are nowhere close to what’s needed to analytically solve the problem.

Substep B. Find the intermediate causes, low leverage points, and symptomatic solutions.

Now our investigations get a little interesting, as we’re about to explain WHY conventional solutions for overcoming change resistance have failed. This information may come as a disconcerting shock to a lot of environmentalists. But then again, it may be seen as incredibly helpful information by others. As I studied the system for evidence of WHY environmentalism has been unable to solve the sustainability problem, a theory arose explaining WHY activists were so attracted to the low leverage point of “more of the truth.” By long habit, activists use a process so entrenched and traditional that it pretty much names itself. The process is Classic Activism, as diagrammed on the next page.
The Basic Process of Classic Activism

Classic activism is the use of the four steps of The Basic Process of Classic Activism for all types of public interest problems. The process is simple and has only four steps. The general idea is to persuade people to follow the proper practices needed to solve the problem. The main strategy is “more of the truth” will solve the problem.

How Classic Activism works

The heart of how Classic Activism works is embodied in this famous quote by cultural anthropologist Margaret Mead: “Never doubt that a small group of thoughtful, committed, citizens can change the world. Indeed, it is the only thing that ever has.” A true classic activist will argue Mead’s words must be true, because thoughtful, committed citizens are all that ever has changed the world for the better. How exactly do citizens change the world? By use of the four steps in the diagram.

A proper practice is a behavior that if followed would directly help to solve the problem. Examples of the proper practices needed to solve the sustainability problem are use of renewable energy, the three R's of reduce, reuse, and recycle, closed loop manufacturing, and the Kyoto Protocol treaty on climate change.

Let’s walk the diagram. Step 1 identifies the problem. The problem symptoms are always caused by proper practices not being followed. If the proper practices are not yet known, then step 2 is needed to find the proper practices. Next, if people don’t know about the proper practices or why they should practice them, step 3 is needed. This attempts to tell people the truth about the problem and the proper prac-
practices. If after that people don’t want to follow the proper practices, and they usually don’t, then **step 4** is needed. This tries to exhort, inspire, and bargain with people to get them to support the proper practices.

If step 4 doesn’t work, what does a classic activist do? The only thing they can do: repeat the steps and somehow do them better. Since that doesn’t involve any root cause analysis or treatment of change resistance as a separate problem to solve, historically Classic Activism has worked poorly on most difficult large-scale social problems, except over a long period of time, such as for women’s suffrage, slavery, and racial discrimination.

Classic Activism is the basic process that activists have been following ever since the government first appeared. It works on those types of problems where “more of the truth” is all that is necessary to prevail, by winning over one mind at a time. It thus works best in democracies.

**More of the truth** is the practice of steps 2, 3, and 4 of Classic Activism. The steps are discover the truth, promote the truth, and magnify the truth.

**The truth** is the proper practices society must follow to optimize the good of the group as a whole. If the proper practices are not yet known, they must be found with step 2. For example, in the environmental sustainability problem agricultural practices that do not require heavy use of pesticides may be developed. In health problems, research proving that smoking causes cancer may be done. In racial discrimination problems, research can be done to prove there is no inherent intelligence related genetic difference between races. And so on.

Once the proper practices and why they should be followed are known, all it **should** take to get people to use them is telling them about the proper practices and why they should use them, which is step 3. This is done with articles, magazines, pilot projects, publicity campaigns, lobbying, the use of the courts to tell judges about the real truth of a situation, and so on.

If step 3 fails, then step 4 is tried. The step 3 techniques are cranked up by the use of more inspiration and exhortation, which slips into emotional arguments and rhetoric. Bargaining is also employed. Models of ideal behavior, such as gardener of the month or a city that started recycling are trotted out. Demonstrations to shock the public into paying attention are used. And so on.

If step 4 fails, the only recourse is to repeat the steps and somehow do them better. This so often fails and leads to so much pent up frustration that some activists resort to a fifth step, violence and revolution. This is illegal in democracies and is not shown.

The process has tremendous logical appeal. The inner talk runs about like this: “Solving this problem is basically a matter of finding out what’s best for the good of all, and then spreading that knowledge. Once people see what’s in their own best interests, they will start doing things that way, because people are rational.” Classic
Activism is enormously popular because it’s been used for so long, it sometimes works.

Classic Activism is so appealing and popular it’s the de facto standard for environmentalism. To my knowledge, all what-to-do environmental literature falls into this process. Silent Spring was a superb mixture of steps 3 and 4, with a little bit of step 2. Natural Capitalism, a book about how corporations can take the lead and create the “next industrial revolution” by switching to more environmentally sustainable technology, uses mostly steps 2 and 3. Al Gore’s Earth in the Balance is mostly 3. Environmental and nature magazines, such as Sierra, The Ecologist, Green Futures, and Audubon Magazine, are steps 3 and 4. Step 3 is also known as education on the facts or “appeal to logic,” while step 4 is the “appeal to emotion,” which attempts to magnify the truth with rhetoric and bargaining. The 2006 Stern Review on the Economics of Climate Change performed step 1 from an economic point of view and presented evidence that “the benefits of strong, early action considerably outweigh the costs,” which is step 3. The actions reviewed were all proper practices. As discussed earlier, the common-pool resource literature sees its mission as finding the right proper coupling practices, which is step 2.

Environmental organizations also rely on steps 2, 3, or 4 to achieve their goals. Lawsuits to comply with existing environmental regulations would seem to fall outside of 2, 3, or 4. However, this is enforcement of the legal truth by telling judges about the truth of the facts involved. It is thus a form of 3. Lobbying is a mixture of 3 and 4. Scientific research into alternative energy, sustainable agriculture, recycling, ways to reduce population, and so forth is 2. Extremist actions such as sit-ins and blocking nuclear test sites are forms of 4. So are demonstrations, marches, and publicity stunts. Polls, such as how strongly people support a clean environment, are a form of 3. They are “the truth” why decision makers should enforce proper practices. Corporate social responsibility campaigns, since they play on psychological elements, are step 4.

Even the innovative sustainability solutions pioneered in developing countries, such as ecotourism, microfinance, acceleration of the demographic transition, direct marketing cooperatives for green products, and community-based common-pool resource management, are a collection of better proper practices. Perfecting them is step 2. Education and assistance is step 3. Pleading and bargaining with developed nations, NGOs, and international agencies to support them and with developing countries to adopt them is step 4.

The Limits to Growth employed the general pattern of Classic Activism. The World3 model focused mostly on step 1: identify the problem. The 1972 first edition said little about the solution. But due to lack of solution progress, the second and third editions did. The 1992 second edition presented “a simple set of general guidelines for restructuring the world system toward sustainability,” such as “improve the signals… speed up response times… minimize the use of nonrenewable resources.”
These are proper coupling practices, so the book was advocating step 2 and performing step 3. The authors acknowledged the presence of systemic change resistance: “Systems strongly resist changes in their information flows, especially in their rules and goals.” (p223) But when addressing how to deal with resistance, the authors turned to the old paradigm of Classic Activism: “In our search for ways to encourage the peaceful restructuring of a system that naturally resists its own transformation, we have tried many tools.” (p223) The tools were “visioning, networking, truth-telling, learning, and loving.” (p224) These are techniques used to implement Classic Activism steps 3 and 4.

The 2004 third edition repeated these suggestions and included one of the clearest descriptions of the practice of Classic Activism that I’ve ever seen. Of the three authors, Dana Meadows, the main voice of the first two editions, “was the unceasing optimist. She was a caring, compassionate believer in humanity. She predicated her entire life’s work on the assumption that if she put enough of the right information in people’s hands, they would ultimately go for the wise, the farsighted, the humane solution [that would solve the problem].” (pxvi) This is step 2.

More recent modeling efforts continue to follow the four steps of Classic Activism. The Millennium Institute’s Threshold 21 sustainability model focuses on how a nation can better manage proper coupling. The IPCC assessment reports seek “the understanding of human induced climate change, potential impacts of climate change and options for mitigation and adaptation.” But this understanding, which is heavily model based, starts with the symptoms and stops at the same intermediate causes of the World3 model: the IPAT factors. Like the three editions of Limits to Growth, the four IPCC assessment reports have progressively tip toed into Classic Activism steps 3 and 4. The fourth report took a leap in section 4: Adaptation and Mitigation Options. This contained an extensive listing of existing proper practices and projections by sector on their effectiveness, which is step 3. Section 5, The Long-term Perspective, used “five reasons for concern” to emphasize that “Adaptation is necessary in the short and longer term to address impacts resulting from the warming that would occur even for the lowest stabilization scenarios assessed.” While expressed in the dry language of scientists, this is nevertheless the exhortation of step 4.

Al Gore’s 2006 documentary film, An Inconvenient Truth, was one long visual example of more of the truth: discover the truth, promote the truth, and magnify the truth. The film concluded with Al saying:

Each one of us is a cause of global warming, but each one of us can make choices to change that with the things we buy, the electricity we use, the cars we drive; we can make choices to bring our individual carbon emissions to zero. The solutions are in our hands, we just have to have the determination to make it happen. We have everything that we need to reduce carbon emissions, everything but political will.
“Each one of us can make choices to change that” means each of us should follow the proper practices to end global warming. That we have everything we need but political will bluntly admits change resistance is too high to solve the problem, and that the problem is insolvable until that resistance is overcome. To somehow overcome that resistance, the film lists actions you can take in the closing credits, such as “Tell your parents not to ruin the world that you will live in” and “Vote for leaders who pledge to solve this crisis.” The film is steps 1, 3 and 4.

However, despite its ubiquity and use by the world’s finest environmentalists, Classic Activism is deeply flawed. It doesn’t find and resolve root causes. Nor does it treat change resistance as a separate problem to solve and to solve first. Classic activists have thus fallen into the deadly embrace of the Superficial Symptoms and One Subproblem Traps discussed earlier.

The main point of this examination of Classic Activism is to show that when it comes to overcoming change resistance, environmentalists are all pushing on the low approach has not and will not work.

The intermediate cause – Economic Growth Is Good

The symptoms of the change resistance subproblem are Successful opposition to passing proposed laws for solving the sustainability problem. Substep A found the immediate cause loop for that opposition is a dominant Race to the Bottom among Politicians. In substep B, SIP tells us to ask WHY is that loop dominant?

The Dueling Loops tells us that loop is dominant because the Race to the Bottom has an inherent advantage over the Race to the Top. All sorts of deception has been used by special interests to attract supporters and make the Race to the Bottom the dominant loop. But what specific false meme deceives supporters into opposing solutions to the sustainability problem?

Investigation found the main false meme to be system acceptance of the fallacious paradigm that Economic Growth Is Good above all else. The worst thing that can happen to a nation (short of war) is a recession or even worse, a depression. The worst global event between the two World Wars was the Great Depression of 1929. The worst global event after World War Two was the Great Recession of 2008. The predominance of this false meme is the intermediate cause of subproblem A.

That Economic Growth Is Good above all else is widely acknowledged. Herman Daly, referring to his reading The Limits to Growth forty years earlier when it was first published in 1972, wrote in 2012 that “it is now forty years later and economic growth is still the number one policy goal of practically all nations; that is undeniable.” Heinz Arndt found the ascendancy of the Economic Growth Is Good meme to be a recent phenomenon:
There is in fact hardly a trace of interest in economic growth as a policy objective in the official or professional literature of western countries before 1950. But it is possible to detect in the five post-war years changes in the climate of opinion which foreshadowed the ascent of growth to preeminence. (p30) By the end of the decade [the 1950s], economic growth had, as one commentator put it, been ‘thrust to the top as apparently the supreme, overriding objective of policy.’ (p41) ...more rapid economic growth came to be regarded as a prophylactic or remedy for all the major current ailments of western economies. (p43, italics added)

“More rapid economic growth” as a “remedy for all the major current ailments” is so universally accepted that it became part of the world’s official solution to the environmental sustainability problem, sustainable development, defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” 47 Development is economic growth and must be increased to solve the problem. “[To stop the] downward spiral of poverty and environmental degradation... What is needed is a new era of economic growth—growth that is forceful and at the same time socially and environmentally sustainable.” 48

Thus the world’s leading “solution” to the environmental sustainability problem, sustainable development, champions Economic Growth Is Good, and thereby makes the environmental sustainability worse instead of better. This demonstrates the dominance of the Economic Growth Is Good meme.

The low leverage points and symptomatic solutions

The Dueling Loops model and the theory of Classic Activism make it easy to conclude that activists follow The Race to the Top among Politicians strategies. Not having analyzed the problem in order to find its root cause, they intuitively sense that the intermediate cause is the universal fallacious paradigm that Economic Growth Is Good. That cause must be countered with “more of the truth,” which is the low leverage point. This is done with steps 2, 3, and 4 of Classic Activism: (2) find the truth in the form of the technical proper practices needed to solve the problem, (3) promote the truth, and (4) if that doesn’t work, magnify the truth with exhortation, inspiration, and bargaining. Because they push on a low leverage point, steps 2, 3, and 4 are all symptomatic solutions.

Substep C. Find the root causes of the intermediate causes.

Substep B found the intermediate cause is the system acceptance of the fallacious paradigm that Growth Is Good. What is the root cause of that intermediate cause? That’s the same asking: WHY is The Race to the Bottom among Politicians dominant most of the time? What is the root cause of that dominance?
Because the Dueling Loops model was designed to find root causes, the answer to this question is built into the model. The main root cause of successful change resistance is the inherent advantage of the Race to the Bottom, which causes that loop to be dominant most of the time.

Root causes must meet the five requirements of a root cause:

Requirement 1. It is clearly a (or the) major cause of the symptoms.

The Dueling Loops model clearly shows how this root cause is the major source of high change resistance. There will, however, be skepticism that something as simple as the inherent advantage of the Race to the Bottom could be the root cause. What about people’s selfishness? What about force of habit? Basic ignorance about the problem? Voter apathy? Money in politics? And so on.

Let’s cut right through this confused mishmash of possible root causes. The precise question is WHY is change resistance so successful? Selfishness is a cause of resistance, rather than a cause of resistance success. The same holds for force of habit, ignorance, apathy, money, etc. People are confusing subproblem A with subproblem B. Subproblem A deals with the success of change resistance. Subproblem B deals with the source. The reason for this continual confusion is that because of no formal problem decomposition, classic activists are trying to simultaneously solve subproblems A, B, C, and D without realizing it. They might as well be trying to sign four signatures simultaneously with one hand.

Such lack of decomposition is not only foolhardy. It makes solving the sustainability problem humanly impossible. On large complex problems one must divide and then conquer: divide et impera. This timeless strategy has worked on the battlefield, in politics, and in large engineering problems. The pattern is it works on large formidable problems of any kind. So why not bring the pattern to the sustainability problem?

Suppose you studied a political system and starting asking why resistance to solving the sustainability problem was so successful. You might decide, as many have, that it’s because activists are not packaging their message well enough, or they’re just not reaching the right people, or they’re being outspent on media messaging and lobbying. But that’s a classic activist viewpoint. These causes deal with individual resistance. What about systemic change resistance and the feedback loops behind that? Causes like these can’t answer deeper questions like this at all.

But causal models like the Dueling Loops can. The model explains exactly why systemic change resistance is successful. It’s because those opposing change use massive amounts of deception to trick voters and politicians into voting for what special interests want, even though that hurts the system as a whole. And what allows that deception to work? The inherent advantage of the Race to the Bottom.

If that advantage didn’t exist change resistance would vanish, because the truth of the matter is that the sustainability problem is the top priority problem of our time.
We thus conclude that the inherent advantage of the Race to the Bottom is the central root cause of successful change resistance.

There may still be some skepticism. How can such a complex subproblem, massive global change resistance to living sustainably, have such a simple root cause, which implies a simple solution?

This situation has occurred before. Before invention of modern democracy by America and France in the late 16th century, autocratic government was the norm. This had long been terribly hard on subjects, who had few rights and were often overtaxed to the point of poverty and rebellion. But all that ended with a single simple solution: addition of the voter feedback loop. Another example is the low productivity of science before invention of the Scientific Method. After it appeared, the basic problem of science, how to tell if a cause-and-effect proposition was probably true, was solved. That each problem was solved by a single simple solution means it had a single simple root cause. For the autocratic ruler problem (diagrammed on page 56) the root cause was no easy way to replace a bad ruler with a good one, i.e. low ruler accountability. There was no strong incentive for rulers to rule for the good of the people instead of themselves. For the low productivity of science problem the root cause was no reliable way to tell a theory that made plenty of sense from one that was actually true.

Because SIP forces you to decompose the one big problem into four tightly focused subproblems, it’s likely that each subproblem has a single main root cause. When they do, that’s a signal that the right subproblems have been identified.

Requirement 2. It has no worthwhile deeper cause.

Why does the Race to the Bottom have an inherent advantage? That might lead to deeper more useful causes.

It hasn’t for two reasons. One is that digging deeper gets into individual factors, like how people make decisions, how force of habit becomes stronger with age, how wording and framing affects infectivity, etc. This is tempting rabbit hole to dig into. Many have. But it’s not productive, because it gets into causes of individual susceptibility to deception. This line of attack falls into the trap of the Fundamental Attribution Error. This trap has snared more classic activists than any other. It works like this: 49 (Italics and bolding added)

A fundamental principle of system dynamics states that the structure of the system gives rise to its behavior. However, people have a strong tendency to attribute the behavior of others to dispositional rather than situational factors, that is, to character and especially character flaws rather than the system in which these people are acting. The tendency to blame the person rather than the system is so strong psychologists call it the “fundamental attribution error.”
In complex systems different people placed in the same structure tend to behave in similar ways. When we attribute behavior to personality we lose sight of how the structure of the system shaped their choices. The attribution of behavior to individuals and special circumstances diverts our attention from the high leverage points where redesigning the system or governing policy can have significant, sustained, beneficial effects on performance. When we attribute behavior to people rather than system structure the focus of management becomes scapegoating and blame, rather than the design of organizations in which ordinary people can achieve extraordinary results.

The Fundamental Attribution Error explains why Classic Activism has such powerful appeal but fails over and over. When solving normal everyday people related (social) problems, we frequently have to win over one mind at a time. This causes the false assumption that can work in the large, such as on the sustainability problem. It cannot, because activists do not have the numbers, money, or power to change the many minds in positions of power required to solve the problem.

Systemic problems can only be solved by resolving systemic root causes. When strong systemic change resistance is present, as it is in the sustainability problem, it cannot be overcome by attempting to directly change the behavior of one mind at a time, as Classic Activism tries to do with steps 3 and 4. One must instead change the system, which is where all individual social agents get their most important behavioral cues from.

The second reason digging deeper is not productive is that the hypothesized root cause, the inherent advantage of the Race to the Bottom, is resolvable. Resolving it will fix the problem. So why dig any deeper?

Requirement 3. It can be resolved.

Effective political deception due to the inherent advantage of deception over the truth has long been a problem. The fact that effectiveness can be greatly reduced has been known just as long. James Hoggan, in *Climate Cover-up: The Crusade to Deny Global Warming*, describes why it’s necessary: (p25, italics added)

…to arm yourself against the effect of those [deceptive] tactics in the future. It’s as Aristotle said more than two thousand years ago: someone who is highly trained in rhetoric can argue any question from every angle—a skill that can be used for good or ill. But Aristotle didn’t teach rhetoric so shysters could play the public for fools. Rather, he was trying to make sure that people would recognize when someone was playing with the language rather than promoting the truth. *He taught rhetoric to inoculate the public against that kind of abuse.*
A voting population can be armed against the effects of deceptive tactics by inoculating them against the abuse of deceptive rhetoric. It can be done. Not perfectly, but good enough to resolve the root cause. A later chapter presents several sample solution elements to show how this can be done.

Requirement 4. Its resolution will not create other equal or bigger problems. Side effects must be considered.

By far the most important requirement of any species is the size and health of its ecological niche. Resolving the root cause of successful change resistance to solving the environmental sustainability problem will not create other problems of equal or bigger size, because no other problems affect Homo sapiens' niche nearly as directly.

Requirement 5. There is no better root cause. All alternatives have been considered.

This is a tough requirement to prove. No one can actually consider all alternatives because the root cause space is so vast. Thus one has to search the space intelligently.

The symptom of the change resistance subproblem is successful opposition to passing proposed laws for solving the environmental sustainability problem. The immediate cause of that is a dominant Race to the Bottom among Politicians. Inspection of the model shows this dominance is due to one key feature of the loop: undetected false memes. This node is not in the Race to the Top. The node is the feature differentiating the Race to the Bottom from the Race to the Top. It is therefore the feature explaining the root cause of the Race to the Bottom’s dominance. High undetected false memes is the same as successful exploitation of the inherent advantage of the Race to the Bottom. Thus the root cause has been found by inspection of the physical system. It’s the only apple on the table.

Is there a better model that would explain the symptoms? That might lead to a better root cause.

There might be. In fact, many improvements to the analysis are certain to be found because it’s so young and is the work of a single researcher. But after fifteen years of analysis and looking for even better root causes, I’ve yet to find anything else even close to persuasively explaining the root cause of such successful change resistance.

Substep D. Find the feedback loops that should be dominant to resolve the root causes.

This is clearly the You Can’t Fool All of the People All of the Time loop. Once it goes dominant the Race to the Bottom no longer has an advantage. Corruption will collapse, as will systemic change resistance to solving problems whose solution would benefit the common good.
Substep E. Find the high leverage points to make those loops go dominant.

This follows smoothly from the root cause. If the root cause is the inherent advantage of the Race to the Bottom, then we need to prevent that advantage. Looking at the model, the advantage occurs because of too many undetected false memes. How can these be greatly reduced? By raising detected false memes. How can that be done? By raising general ability to detect political deception from low to high. That is the high leverage point. Solutions must push there to solve the subproblem, as demonstrated in Run 14 on page 114. That scenario concluded that “If the model is correct, then raising the general ability to detect political deception from low to high is all it takes to make the Race to the Top go dominant and thus solve the change resistance part of the problem.” To summarize, the high leverage point is: Raise general ability to detect political deception from low to high.

The evidence

The Dueling Loops of the Political Powerplace model offers an insightful explanation of why change resistance to solve the sustainability problem is so high. It’s because of the unresolved root cause of the inherent advantage of the Race to the Bottom. This causes the Race to the Bottom among Politicians feedback loop to be the dominant loop most of the time in most countries. Since that loop is controlled by each country’s most powerful special interests, the average political system places a low priority on solving common good problems like sustainability.

The high leverage point is raise general ability to detect political deception. Once that’s done the system will flip from a dominant Race to the Bottom to a dominant Race to the Top. After that, political systems in which this has occurred will aggressively seek to solve common good problems, including sustainability.

But does the Dueling Loops structure really exist?

The evidence shows it does. Noel and Thérien, in their book on Left and Right in Global Politics, 2008, found that “global politics is first and foremost a debate between the left and the right. ... The left-right dichotomy occupies a special place, as the most enduring, universal, and encompassing of all political strategies.” (p3)

The Dueling Loops explains why the left-right dichotomy exists. The two dueling loops each embody an enduring, stable political strategy. The Race to the Top houses the progressive left, who lean towards equality of opportunity and justice because that optimizes the common good. The Race to the Bottom houses the conservative right, who profess the freedom of the individual, the power of free markets, and preference for the status quo, because that maximizes what today’s powerful special interests want.

The dominant special interest changes over time. Currently it is Corporatis profitis. This explains why the right’s chief current concern is the power of free markets
and unlimited economic growth. The status quo is preferred, because it favors Corporatis profitis and his allies. Freedom of the individual is championed, because that lets individuals do whatever they want, with a minimum of regard for how that affects equality of opportunity or the common good. What “freedom of the individual” really means is Corporatis profitis managers don’t want to be regulated.

Noel and Thérien present the strongest evidence of the dominance of the Race to the Bottom that I’ve encountered. Page 34 displays the figure below. 50

The data covers seventy-eight societies with a representative sample of at least 1,000 people per society. The respondents saw 5 as the midpoint since there’s no point at 5.5, which would be the true midpoint. 25% saw themselves as on the left, 30% in the center and independent, and 45% on the right. Even if 5.5 is used as the midpoint, 45% are on the left and 55% are on the right. The right is clearly dominant. The 30% in the center corresponds to the stock of neutralists in the Dueling Loops model.

Finally Noel and Thérien place environmentalism on the political spectrum, “with environmentalists on the left and their opponents on the right. Companies like British Petroleum or General Electric may have jumped on the environmental bandwagon, but overall business still tends to oppose environmental policies that threaten to reduce profits.” (p211)

As another example of what the data show, below is an extract from a presentation on conservative versus liberal think tanks, by Andrew Rich, assistant professor of political science at the City College of New York: (Italics added) 51

For example, one of the questions on my survey asked think tank leaders about the criteria they used when selecting or promoting full-time staff. They had nine options to choose from. Leaders of conservative think tanks most often named political or ideological orientation as the most important consideration when hiring staff. Almost three-quarters of the leaders of
conservative think tanks named political or ideological orientation at the top when making decisions about who to hire. Next in importance were issue expertise, media and public affairs experience, and a record of publication.

By contrast, for the leaders of liberal think tanks, issue expertise and education were most important. Liberals placed a premium on advanced degrees and proper training. Ideology was further down the list with a 30 point spread between conservatives and liberals on that characteristic.

Andrew went on to interpret the above data this way:

Conservative leaders are interested in hiring politically conservative people above all else and they want folks who are prepared with experience to make a contribution in the war of ideas. Progressives have a different set of priorities: a focus on training, knowledge and expertise.

The Dueling Loops, however, allow a different and deeper interpretation. To me this data means that conservative think tanks are promoting a “political or ideological orientation” by any means necessary, while liberal think tanks are promoting the truth, which is why “issue expertise and education were most important.”

**Solution requirements specifications**

One benefit of a formal comprehensive process like SIP is that social problem solving may be treated as social system engineering. Large social systems self-evolve. That self-evolution may be steered, somewhat, by incrementally producing solution requirements for existing problems. Each problem is analyzed for its causal structure and especially its high leverage points, where solution elements must push. Solution requirements are then specified, contracted, developed, tested, and implemented. Waves of successive improvement will cause a system to reach successively higher states of desired behavior until the system goal state is achieved.

That’s the conceptual vision. It duplicates how engineering occurs in many other fields, where requirement specifications are routinely used to contract for many types of construction. Each newly engineered large-scale project, like a dam, a manufacturing plant, or a space program, successively improves a field of engineering. It is a matter of time until that practice comes to social system engineering.

The concept is young. Perhaps you will have ideas on how to improve it. An example of a solution requirements specification is shown on the next page.
### Solution Requirements Specification for Subproblem A – How to Overcome Change Resistance

<table>
<thead>
<tr>
<th>1. Main problem</th>
<th>The global environmental sustainability problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Subproblem</td>
<td>How to overcome change resistance</td>
</tr>
<tr>
<td>3. Subproblem symptoms</td>
<td>Successful opposition to passing proposed laws for solving the sustainability problem</td>
</tr>
<tr>
<td>4. Intermediate cause</td>
<td>System acceptance of the fallacious paradigm that Economic Growth Is Good above all else</td>
</tr>
<tr>
<td>5. Root cause</td>
<td>The inherent advantage of the Race to the Bottom</td>
</tr>
<tr>
<td>6. High leverage point</td>
<td>Raise general ability to detect political deception from low to high</td>
</tr>
<tr>
<td>7. Model</td>
<td>Basic Dueling Loops of the Political Powerplace</td>
</tr>
</tbody>
</table>

### 9. Standard Requirements:
Solution elements must resolve the root cause by pushing on the high leverage point, in such a manner that a permanent system mode change occurs. The new root cause forces must be engineered such that new or strengthened feedback loops lock the system into the new mode.

- You can’t manage what you can’t measure. Changes in the root cause force must be measured. A measurement method shall be used to refine solutions under development, to evaluate the effectiveness of implemented solutions, and to monitor the long term health of solutions.

- These specifications represent a solution strategy hypothesis. Solution elements can be designed to push on the high leverage point. Then the solutions can be tested and evolved until final solutions emerge that can solve the problem via large-scale implementation.

### 10. Measurement Considerations:
We can offer this guideline:

An accurate method of measuring ability to detect deception (ATDD) shall be developed. For groups of people or political units tested, baseline ATDD shall be compared to ATDD after various solution elements are applied. After solution application, ATDD shall be measured immediately and then periodically, to determine how long solution effects last. ATDD can also be called the level of truth literacy, i.e. the percent of falsehood spotted.

### 11. Solution Considerations:
See the analysis write-up for details on model behavior and how general ability to detect political deception can be raised. The public’s ability to detect false memes used for political purposes must be raised from low to high. This can be done directly, such as by education, or indirectly, such as by Truth Ratings, a Quality of Life Index, and a Sustainability Index, or both. We expect both will be the most effective.