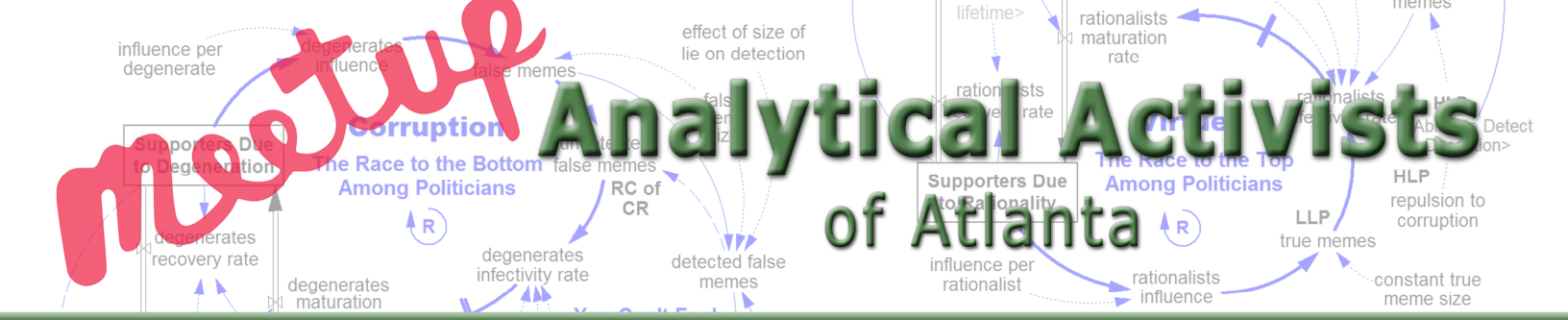


Meetup Analytical Activists of Atlanta

Training Plan

This training is for those who are deeply committed to learning how to help solve society's biggest problems in a more effective manner. It's ambitious. But you only have to learn as much or go as deep as you want to.

Our goal is to replace Classic Activism with Analytical Activism, one small step at a time. Those steps begin with learning the key tools of Analytical Activism, which allow you to structure your analysis so you can make sense of highly complex problems, like those in the list of unsolved problems. This is from Film One in the *Democracy in Crisis* film series.

The World's Most Important Social Problems

Solved	Unsolved
1. Slavery	1. Poverty
2. Serfdom	2. War
3. Civil Rights	3. Corruption
4. Colonialism	4. Discrimination
5. Women's Suffrage	5. Large Recessions
6. Russian Communism	6. High Economic Inequality
	7. Environmental Sustainability
	8. Climate Change

9. Hate-based Authoritarianism

Prevents solution of all the other problems

Training Stage One – Problem Definition and Analysis

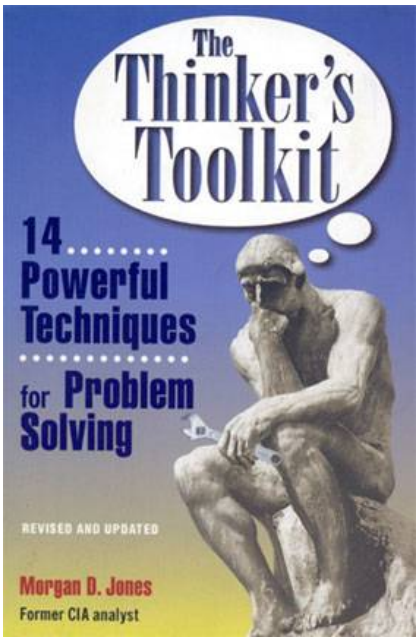
The System Improvement Process (SIP) is our main tool. It has four main steps: Problem Definition, Analysis, Solution Convergence, and Implementation. Stage one covers the first two steps.

1. Assignment - Structuring Your Analysis

The very first step is to break out of the mindset of **Classic Activism**. Classic activists don't structure their analysis of a problem. Instead, they get a general grasp of the problem, then intuitively select what looks like the best solution, and then refine the solution to fit the problem. Finally, they promote the solution, improving it as they go. Sometimes it works, sometimes it doesn't.

The process works on easy problems because their root causes are fairly obvious. But it fails on the hard problems because their root causes are hard to see. Why are they hard to see? Because classic activists do not properly **structure their analysis**. Here's what that term means:

"Exactly what does *structuring one's analysis* mean? The word *analysis* means separating a problem into its constituent elements. Doing so reduces complex issues to their simplest terms.



"We settle for partial solutions because our minds simply can't digest or cope with all of the intricacies of complex problems. We thus tend to oversimplify....

"If we are to solve problems, from those confined to a single individual to those affecting whole nations, we must learn how to identify and break out of restrictive mindsets and give full, serious consideration to alternative solutions. We must learn how to deal with the compulsions of the human mind that, by defeating objective analysis, close the mind to alternatives. Failure to consider alternatives fully is the most common cause of flawed or incomplete analysis.

"In other words, we must learn how to keep an open mind—one of the most difficult things we human beings can do. So any technique we can impose on the mind to force it open is helpful. It should come as no surprise, then, that *all* of the techniques presented in this book have the effect of opening the mind. The fact is, structuring one's analysis is the quickest, surest path to opening the mind to alternatives."

Morgan Jones, author of *The Thinker's Toolkit*
1998, pages xi, xii, and xiii, italics are in the original

The first assignment is to buy a copy of *The Thinker's Toolkit* and study the Introduction and first two chapters. (I've ordered 5 copies of the book. Contact me for a copy.) This is incredibly well written and an exciting read. You'll know you've got the message when all of a sudden you can see *the critical need to structure your analysis* of difficult problems and you *really* know what structuring your analysis means.

For extra credit, read a few of the other chapters that look interesting. Skim the beginning of all the chapters to become slightly familiar with all 14 techniques. Now you can pull out the right technique at the right time. These techniques can be used to supplement the Thwink tools. On medium difficulty social problems, the techniques can sometimes be used instead of the Thwink tools.

2. Assignment – What Is Analytical Activism?

Go to Thwink.org and study the glossary entries on:

1. **Classic Activism**
2. **Analytical Activism**

Now, in your own words, write down what Classic Activism and Analytical Activism are. What are the key differences? Why do these differences make *the* difference on difficult large-scale social problems?

If you discover that answering these questions is fairly easy, then congratulations. You have broken through into the mindset of Analytical Activism. As we say at Thwink.org:

"Welcome to a whole new way of thwinking!"

Now let's apply our new mindset. Read the glossary entry on **Best Practices**. Note the *Assessment of Process Maturity in the Four Best Practices* table. That's pretty shocking data that explains so much.

Then perform a similar assessment on your own past process and a few organizations you know. To do this, in the Best Practices glossary entry click on the **An Assessment of Process Maturity** link. There's no need to read Chapter 8, except for extra credit or to do a better job of assessment. Study the assessment table. In the middle are *Analytical Activism Key Best Practices.* Click on the table and print it out or use the copy below.

An Assessment of the Process Maturity of the Environmental Movement

Showing the current dominance of Classic Activism and why that causes low mission success

Each score has two parts: raw and weighted. Raw scores for each KPE are assigned this way:

0 - Does not exist, not done
1 - Very low productivity
2 - Slightly productive
3 - Moderately productive
4 - Highly productive
5 - World class

A 3n means not applicable, with an automatic raw score of 3.

	Key Process Elements (KPEs)																	
	Classic Activism Steps 1, 2, 3 and 4					Analytical Activism Key Best Practices					Problem Domain Key Best Practices				Total score on a scale of 0 to 100	Process Maturity Rating = Total score squared. On a scale of 0 to 10,000.	Overall mission success
	1. Identify the problem	2. Find the proper practices	3. Tell people the truth about the problem and the proper practices	4. If that fails, exhort and inspire people to support proper practices	Weighted subtotal	5. Formal def., mgt., and cont. impr. of a process that fits the problem	6. A true analysis of the problem is performed	7. The Scientific Method is used to prove all key assumptions	8. Learning from past failures and successes is maximized	Weighted subtotal	9. The analysis centers on a social system structural analysis	10. Low and high leverage points have been identified and tested	11. Why change resistance is so successful has been determined	Weighted subtotal			
Element Weight	1	1	1	0		4	3	3	2		2	2	1				
Maximum weighted score	5	5	5	0	**15**	20	15	15	10	**60**	10	10	5	**25**	100	**10,000**	
Organizations																	
1. Alliance for Climate Protect.	3n 3	3n 3	5 5	5 0	**11**	0 0	0 0	0 0	2 4	**4**	0 0	0 0	0 0	**0**	15	**225**	Low
2. Club of Rome	2 2	2 2	5 5	5 0	**9**	0 0	1 3	0 0	2 4	**7**	0 0	0 0	0 0	**0**	16	**256**	Low
3. European Union Env. DG	5 5	5 5	5 5	1 0	**15**	3 12	3 9	3 9	5 10	**40**	3n 6	4 8	3n 3	**17**	72	**5,184**	High
4. Natural Step	3 3	4 4	5 5	5 0	**12**	1 4	0 0	0 0	1 1	**5**	0 0	0 0	0 0	**0**	17	**289**	Low
5. Natural Resources Def. Con.	3 3	3n 3	5 5	0 0	**11**	0 0	0 0	0 0	3 6	**6**	0 0	0 0	0 0	**0**	17	**289**	Low
6. Nature Conservancy	5 5	5 5	5 5	3 0	**15**	5 20	4 12	4 12	4 8	**52**	0 0	0 0	0 0	**0**	67	**4,489**	Med
7. Sierra Club	2 2	3n 3	5 5	5 0	**10**	1 4	0 0	0 0	2 4	**8**	0 0	0 0	0 0	**0**	18	**424**	Low
8. United Nations Env. Program	1 1	3n 3	5 5	4 0	**9**	0 0	0 0	0 0	2 4	**4**	0 0	0 0	0 0	**0**	13	**169**	Low
9. Union of Concern. Scientists	2 2	5 5	5 5	3 0	**12**	0 0	0 0	0 0	1 2	**2**	0 0	0 0	0 0	**0**	14	**196**	Low
10. World Resources Institute	2 2	5 5	5 5	5 0	**12**	0 0	0 0	0 0	3 6	**6**	0 0	0 0	0 0	**0**	18	**424**	Low
(Solution factories)	5 5	3 3	3 3	0 0	**11**	4 16	5 15	5 15	4 8	**54**	5 10	5 10	5 5	**25**	90	**8,100**	?

The four blank lines at the bottom of the table are for you to use when performing some quick assessments. Enter your name as the first organization. Then enter a few more organizations that you would like to assess.

The key best practices of Analytical Activism are:

5. Formal definition, management, and continuous improvement of a **process** that fits the problem. (Weight of 4)
6. A **true analysis** of the problem is performed. (Weight of 3)
7. The **Scientific Method** is used to prove all key assumptions. (Weight of 3)
8. **Learning** from past mistakes and successes **is maximized**. (Weight of 2)

Chapter 8 defines a true analysis this way:

> "When we say a **true analysis** of the problem is performed, we mean:
>
> 1. **Structure** – A structured examination of the system with the problem has been performed.
> 2. **Diagnosis** – The fundamental flaws causing the problem symptoms have been found. The patient has been diagnosed. (The root causes have been identified.)
> 3. **Resolution space exhaustion** – An exhaustive examination of the full range of solution alternatives to resolve those flaws has been conducted."

Each practice has a weight. To score a practice, enter a raw score ranging from 0 to 5, as described on the table. Then multiply this by its weight and enter that as the weighted score. Do this for all four key best practices of Analytical Activism. Add up the weighted scores to determine the total score. For example, the total for the Nature Conservancy was 52.

Do this for yourself and a few organizations. What does this data tell you? Share your insights with others in the group.

3. Film Session – Introduction to the Tools

You do *assignments* on your own. In *sessions*, you work with a trainer such as Jack. You should prepare for this session by studying these glossary entries:

1. Social Force Diagrams
2. Laws of Root Cause Analysis
3. System Improvement Process

Study them in that order. This will be challenging material since we are learning some extremely powerful tools. Don't expect to fully understand them at first. That's why I want to walk you through them. Take your time. Write down your questions. Where can this material be improved?

Now that we know what structuring an analysis means, and we've seen the critical need for switching to the best practices of Analytical Activism, how do we do that? It all begins with understanding the tools that analytical activists need to begin using. Once you understand them, they are simpler than you might have expected.

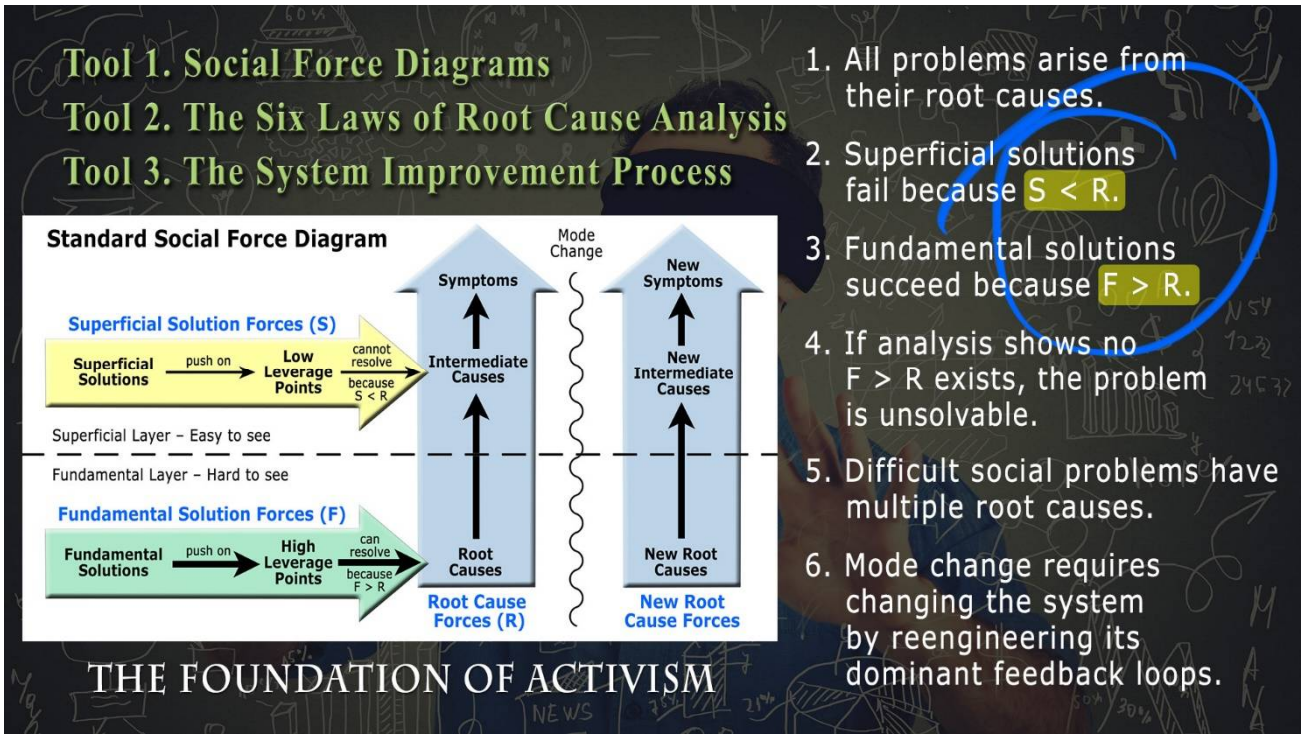
To maximize the chance of your learning the tools successfully, Thwink.org has prepared **the *Democracy in Crisis* film series**. Democracy is in crisis because it's unable to solve the unsolved problems. Some of these are so potentially catastrophic, like war and climate change, that they could realistically cause human population to fall by 80% or more.

The series contains three films. The first is on the Thwink.org home page. **Before this session watch it closely.** Can you see the signs that civilization *is* sliding back into the Authoritarian Ruler Period? Do you agree that these are approximately the most important solved and unsolved large-scale social problems? Why? I hope you don't agree completely, because the list is somewhat arbitrary.

The first film, titled **The Right Question**, poses the right question as: *"WHY is activism able to solve some problems and not others?"* Is that the most productive top-level question we can ask? Given your studies in the earlier assignments, what do you suspect is the answer?

The second film, titled **The Right Tools**, shifts from a high-level view of the problem in general to a low-level look at the tools. *I believe this shift is very difficult because most people are not trained engineers or analytical problem solvers.* Therefore, my approach is to require that **we watch the second film together**. It runs an hour. It's designed to be a conversion experience. Little light bulbs should start popping on, if they haven't already. As we go we can pause the film at any time for you to make comments, ask questions, take notes, etc. We're maximizing quality of learning. You go at your pace with an expert at your side. We take no chances that something will be fuzzy, poorly explained, left out, etc. *The conversion experience from classic to analytical activism is so crucial it must occur deeply and permanently, or your training will fail.*

Then we get serious. We discuss the film and begin learning the **three main tools** in depth, as listed in this image from Film 2:



You need to memorize the above image and grasp what every detail means.

I will walk you through each of the tools and we will discuss them together. At this stage, we will cover tool three lightly. The idea is to first learn tools one and two. Then the third tool will make sense, since it's the first two tools wrapped in a formal process that fits the problem.

4. Assignment – Social Force Diagrams (SFD)

Here you practice drawing SFDs. People learn best by doing. Draw ten or more practice SFDs on your own. The goal is to become fluent in this tool. Pick easy problems to diagram, like getting little Johnny to eat his spinach or getting pedestrians to not jaywalk. Then work up to more difficult past or present problems, like universal education or crime of some sort. It's okay to diagram only the superficial layer of a problem or have missing nodes in a diagram. If possible, use a good diagramming tool like Visio.

5. Session – The Six Laws of Root Cause Analysis

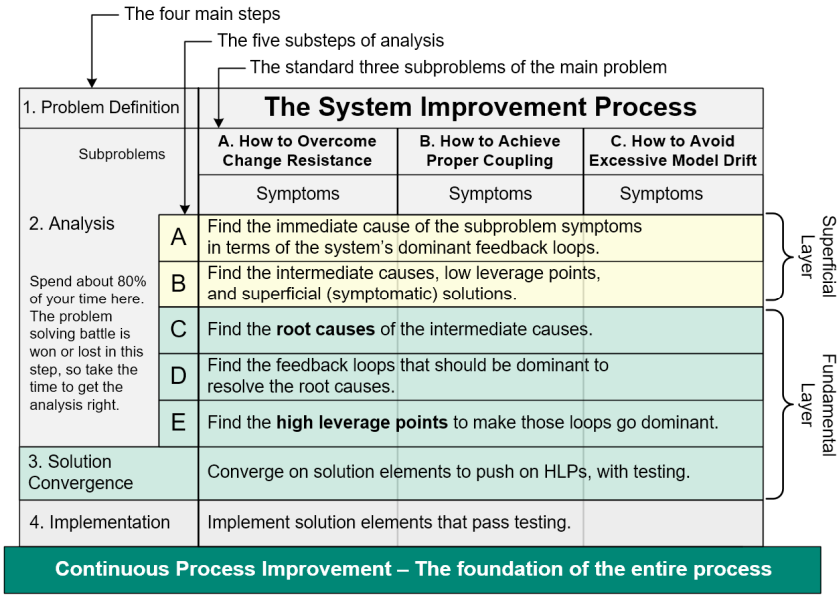
This session is a detailed review of assignment 4. We take your practice SFDs, as well as the ones in the glossary entry on SFD, and subject them to the six laws, explaining the laws and drawing out their extensive implications. As we go, we may fill in missing portions of your diagrams or revise them. The key to the six laws is the two equations, S < R and F > R.

I really want *you* to deeply grasp the six laws and will help you any way I can.

6. Session – The System Improvement Process (SIP)

Now we're ready for the most powerful tool of them all, SIP. Homework preparation for this is to **study the chapter on SIP** in the book *Cutting Through Complexity*. Go to the Thwink.org tab for Publications. Click on All Books. Click on *Cutting Through Complexity*. Then click on the book cover to read the PDF. Look for Chapter 3. You may want to print the chapter.

The preparation assignment for this session is for you to **pick three sample problems to analyze**. These should be **difficult large-scale social problems**. Difficult means there has been long-term solution failure, over 25 years or more. Do not pick small-scale problems like how to make a person happy or how to eliminate a particular gang in a neighborhood. These are at the *micro level* and generally require changing one mind at a time. We are looking at the *macro level*, for large-scale social problems with *systemic* root causes, where we change the system. From the Thwink glossary entry for systemic:



> "In social problems, **systemic** means originating from the structure of the system in such a manner as to affect the behavior of most or all social agents of certain types, as opposed to originating from individual agents."

It follows that solving systemic problems requires changing the structure of the system.

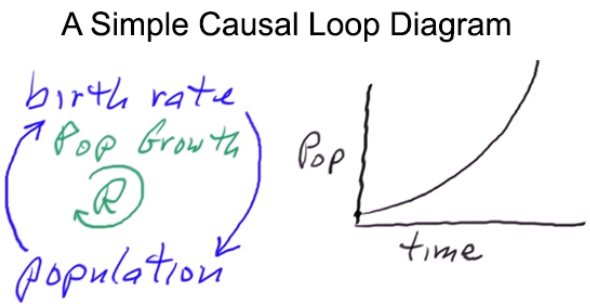
I will explain how SIP works. Then we will do a quick analysis of one of your sample problems, beginning with Problem Definition, the first step of SIP. Problem Definition will be formally defined. Then you will be challenged to define several problems in order to see things from that perspective. It's a very different one from Classic Activism.

Extra credit: If you want to get ahead of the curve, then for each of your sample problems define its Problem Definition before this session. It doesn't have to be prefect. Just give it a try.

7. Session – Learning Causal Loop Diagrams (CLD)

The preparation assignment is:

1. Read the glossary entry on **Causal Loop Diagram**.
2. Read the glossary entry on the System Improvement Process, focusing on **The Five Substeps of Analysis**. Note the role feedback loops play.
3. Watch video 3 in The Dueling Loops Video Series on Thwink.org.



A **Causal Loop Diagram** shows a system's key feedback loops. CLDs are a powerful tool for understanding social problems. The key idea is that all large-scale social problems are caused by misbehaving feedback loops. Find those loops, diagram them, study them, find the root causes, and you will at last *correctly* understand the problem.

There appears to be no other way this can be done. That's why it's so vital for social problem solvers to learn causal loop diagramming. Thinking in terms of feedback loops and drawing them is such a novel skill, and such a different way of thinking, that at first this may seem impossible. But my goal is to help you bust through that barrier and take the first step toward seeing how every social problem can be analyzed by diagramming its key feedback loops.

This will not be easy. It will take a while. Give it time. Give it all the love, determination, and detachment you can muster.

In this session, I will explain how CLDs work and draw a few. You can watch every pencil stroke. Then you will get a chance to do it yourself. First you diagram the same problems I just did. Then you diagram some slightly different problems. And so on, until all of a sudden you say "I think I'm starting to see how this works." That's the little light bulb we're looking for.

Then you and the trainer will design an assignment that fits you and your interests. **This will be followed by as many further sessions as needed**, until you are fluent in drawing CLDs. I'd estimate this will take 5 to 10 sessions. These can be group sessions, where several of us work together to master this skill. Like learning how to ride a bicycle, there is no substitute for *lots* of practice.

Study additional material as needed to master causal loop diagrams. I can heartily recommend:

1. Peter Senge's *The Fifth Discipline*, with emphasis on chapters 5, 6, and 7.
2. The companion *The Fifth Discipline Fieldbook*, part two on *Systems Thinking*

At the end, you should be able to take any simple social problem and very quickly rough out its main feedback loops. They don't have to be fully correct. But they do have to indicate that you are now *naturally* thinking in terms of a problem's key feedback loops.

After this, continue to do further practice CLDs on your own. Gradually increase the difficulty of your practice problems.

Once you master this skill, you will be astonished how powerful it can be, in terms of the *productive* insights good CLDs can generate. No other tool can do this, though as your analysis deepens you will need to simulate your CLDs using system dynamics.

8. Film Session – A Sample Analysis Using SIP

The preparation assignment for this session is to try applying SIP to one or more sample problems of your choice.

This session is designed to be another conversion experience. We will watch Film 3, titled **The Real Problem to Solve**. Once again, we will pause and discuss the film as we go, as needed. Or we may do that after watching it, as we go back to certain places.

The film covers the highlights of applying SIP to the Global Environmental Sustainability Problem. The biggest surprise of the analysis was discovery that all the unsolved problems are symptoms of a deeper problem, which is The Real Problem to Solve.

9. Assignment – Listing Possible Problems to Analyze

Now we shift gears into applying the tools. We ourselves switch from Classic Activism to Analytical Activism. In my humble opinion this is a huge step in mankind's progress towards higher levels of being, and opens the door to the potential that lies within all human beings, if given the chance.

There are thousands of problems out there to solve. You may have a pet problem or two, and will think of more. Our goal is to find *solvable* problems. These must have what we suspect are **local root causes**, so that we and the local organizations we work with can realistically solve them. We must avoid problems with systemic root causes, at the regional, national or global level, because we simply don't have the resources to push on the high leverage points.

On your own, list possible problems to analyze. Keep an open mind. For example, there could easily be a subproblem to one of your pet problems *that has local root causes*.

10. Session – Narrowing the List to One Problem

Preparation for this session is your list of possible problems to analyze. Rate each problem on how local you think it is, on a scale of 0 to 100%, with 100% being extremely local. Sort the list with 100% at the top. The problems at the top may appear to be your best choice. But they may *not* be the easiest to analyze. They may also require extensive resources to collect data, test, or implement the solutions. Keep an open mind, and start to *really* understand that list.

People can do only one thing well at a time. We need to *focus* our limited mental and physical abilities on a single problem to analyze and possibly solve, or at least begin to get the problem on a path to a solution.

Using everything we've covered so far and more, I will help you to narrow you list and select a single problem. As we go, I'll cover some stories about various social problems that did or didn't have local root causes. (As soon as I can, I hope to write a Thwink article on this.)

An important consideration is that the group must focus on only a few local problems. We can't have ten people working on ten problems. This will probably mean that once we whittle the many possible problems down to a few, each Atlanta Analytical Activist member will need to choose a team and problem to work with. This will be a fluid situation.

11. Session – Beginning Your Problem Analysis

Preparation for this session is to begin, as best you can, your or your team's analysis. You may also want to begin collecting relevant data. Don't expect to make any conceptual breakthroughs at this point. It took me three years, from 2001 to 2004, to get my first big insight on the sustainability problem. The insight was the first Dueling Loops of the Political Powerplace causal loop diagram. After that more insights came rapidly.

But do expect to make a conceptual breakthrough in seeing the problem very differently from the way you and others working on the problem have been looking at it.

In this session, we begin to apply SIP to your (or a team's) problem. We will proceed slowly and cautiously, with modest expectations. Our goal in this session is to lay a solid foundation that your analysis can begin to grow on.

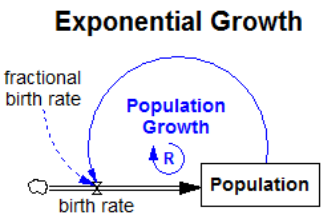
Our Long-term Project

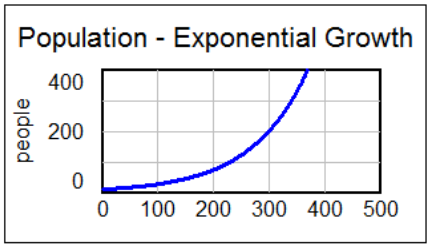
After this you continue on your own or working with a team, applying the right tools and working with others and organizations as necessary. If it's a difficult problem, expect the analysis to take quite a while, months to years. It will be difficult at times. For those times, as well as to just check on your progress in general, please schedule additional training sessions as needed.

It won't be long before you are not only making progress that few thought was possible. You will also be an analytical activist, spreading the word. That is going to help a lot of people.

Feedback Loop Simulation Modeling

Eventually you will need to put your CLD's in a simulation model in order to build a fully rigorous analysis. That requires learning another tool, system dynamics modeling. That's an advanced tool and a tricky skill to pick up. To fill this gap I will initially do the simulation modeling, which is one reason our group can tackle only a very small number of problems at a time.





Over time others may want to learn this skill. We can design a training plan for that.

The figure takes the Population Growth CLD shown above and puts it in a system dynamics simulation model.

For further information read the **System Dynamics** entry in the glossary.

Training Stage Two – Solution Convergence

After the Atlanta Analytical Activists are well on the road to analyzing a few problems, training stage two will be designed.

In stage one, don't even think about what possible solutions might be. That biases your analysis. Without realizing it, your subconsciousness starts ruling out all kinds of things. The phenomenon of *confirmation bias* takes over, as your mind evolves an analysis that supports your pre-determined conclusion that a certain solution will work.

Confirmation bias is defined as "the tendency to interpret new evidence as confirmation of one's existing beliefs or theories." (OxfordDictionaries.com)

This point is so critical that here's an extract from *The Thinker's Toolkit*, p23: (Italics are in the original.)

> "While biases enable us to process new information extremely rapidly by taking mental shortcuts, the rapidity of this process and the fact that it is unconscious—and thus uncontrolled—have the unfortunate effect of strengthening and validating our biases at the expense of truth.
>
> "The reason is that we tend to give high value to new information that is *consistent* with our biases, thus reinforcing them, while giving low value to, and even rejecting, new information that is *inconsistent* with our biases, thus preserving them. New information that is *ambiguous* either is construed as consistent with our biases or is dismissed as irrelevant. In this respect, biases are like deadly viruses, unseen killers of objective truth."

Good luck on your analytical journey. It will be hard. But I am totally committed to walking beside you every step of the way.

Jack Harich

This training plan will evolve as needed.