

# THE DUALISTIC NATURE OF THE SUSTAINABILITY PROBLEM

**All problems have a dual nature:** the obvious and the rest. Difficult social problems are difficult because they present themselves in a layered manner. Only the top few layers are obvious. The rest lie hidden beneath the blanket of complexity. Traditional viewpoints, such as those found in grassroots activism, traditional academia, and mainstream political thinking, can see only the obvious upper layers as shaded in green. (If you are reading this in black and white, this is the top layer and the left halves of layers 2 and 3.)

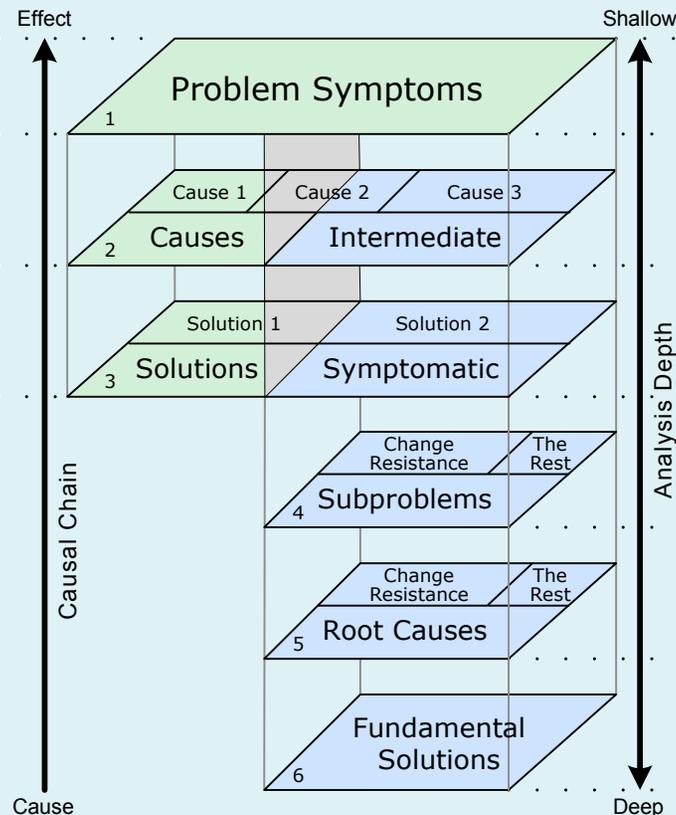
The flip side of the duality is seeing the problem from an analytical point of view. This requires realization that: **Difficult problems can be solved only by resolving their root causes.** This holds because ever since The Enlightenment pragmatic thinkers have held as their fundamental insight the rule that all effects have a cause that can be determined by inspection of the system.

## Traditional Viewpoint

These are the **symptoms** that define the problem. They must be solved.

The **causes** of the symptoms must be changed, such as the cause of climate change is excessive greenhouse gas emissions.

Since that's the cause, the **solution** (for example) is to lower emissions with solutions like renewable energy and conservation.



## Analytical Viewpoint

These are the symptoms that define one end of the **causal chain** causing the problem. To solve the problem we must analyze its causal chains.

These are the obvious and **intermediate causes** of the problem. Our challenge is to drill down in the causal chains until we find the root causes.

The analytical mind sees these as **symptomatic solutions** since they try to solve the direct causes of the symptoms. According to the laws of physics this cannot work because the causal chain runs past the direct causes to the root causes.

Analysis of difficult social problems requires **decomposition into subproblems**. Otherwise you're trying to solve multiple subproblems simultaneously without realizing it.

The **root causes** of each subproblem are found. The most important is **change resistance**, because if that is not overcome then the rest of the subproblems cannot be solved.

Finally **fundamental solutions** are designed and tested. Since each solution resolves a specific root cause, the solution set will have high solution accuracy. It's like firing up close at a known target. The bulls eye is the root cause.

**The model shown is incomplete.** Not shown are further subproblems, feedback loops, and low and high leverage points. However, the layers capture the essence of the duality. Presently nearly all work employs the traditional viewpoint. We hypothesize that once sustainability advocates grasp the dualistic nature of the problem they will shift their attention to the analytical viewpoint.

This model captures the essence of **the research at Thwink.org**. For further information on the tools required to apply the analytical viewpoint to the sustainability problem, as well as a preliminary analysis, please see the website.

A very special thanks to Jesse James Garrett for the model at <http://www.jjg.net/elements/pdf/elements.pdf>. His model served as the inspiration for this one.