Creative Problem Solving Technique

Part3. Reconsidering Your Goals

1905

Reconsidering Your Starting Point

출발점을 다시 생각하라

Reconsidering Your Starting Point

Natural gas is odorless so, in the early days of using natural gas
to heat buildings and cook, someone would occasionally light a match
without realizing that a gas leak had filled the air with gas.
Poof! A definite problem worth solving.
Inventors quickly began designing devices that would detect the presence of
natural gas in the air and sound an alarm.
The designers of these electronic devices were impressive;
they even incorporated features to ensure that the device itself
didn't generate sparks that could ignite the gas.
However, the best solution was not a detection device.
Instead, a gas that could be easily smelled was added
to the odorless natural gas so that a leak could be detected by
a human's built-in gas detector, the nose!

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Reconsidering Your Starting Point

Reconsider your starting point.
Do so by ignoring what you've been trying to accomplish
and looking at the problem from a broader perspective.
A solution can fail to solve the problem as you originally defined it,
yet solve the problem you really want solved.

Reconsidering Your Goals
At Any Time
언제든지 목표를 다시 생각하라

Reconsidering Your Goals At Any Time

Managers of an open-pit copper mine in Utah
asked an engineer fresh out of college to find a better way
to arrange the railroad tracks used by trains to remove the ore.
As the ore was removed from the pit, the railroad tracks had to be re-laid
to match the pit's new contours and this was very expensive.
Although the managers didn't expect the new engineer to succeed,
he created a detailed proposal that they later implemented.
He convinced them to replace the trains with heavy trucks and
use roads instead of railroad tracks.
An important factor in changing their minds was that he calculated the cost
of using trucks and showed it to be less expensive than using railroad trains.
Notice that the goal in this example was broadened from creating a less expensive way
to remove the ore from the mine.

Reconsidering Your Goals At Any Time

Whether you're working individually or as part of a group,
Be willing to reconsider your goals at any time throughout
the creative problem solving process.
If you find yourself thinking
"This idea has some potential, but it doesn't fit my goals",
Resist the temptation to toss out the idea.
Instead, recognize that there might be something wrong
with the goals – regardless of how carefully you chose them.

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Converting Negative Goals
To Positive Goals

부정적 표현의 목표를 긍정적 표현으로 바꿔라

Converting Negative Goals To Positive Goals

Its' usually obvious what you don't want,
but figuring out what you do want can reveal useful, fresh perspectives.

• Stop wars.
• Eliminate hunger.
• Resolve the drug problem.
• Promote non-discrimination.

Negative goals amount to pointing somewhere and saying
"No, don't go there!", whereas positive goals amount to pointing
in a different direction and saying "Let's go there!"

"Stop wars" → "Let's have peace"

Converting Negative Goals To Positive Goals

Of course you know what you don't want.
But do you know what you do want?
Once you know where you want to go,
discovering a way to get there becomes easier.

Heading In The Direction
Of An Ideal Solution

이상적인 목표를 정해 해결 방향을 찾아라

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Heading In The Direction Of An Ideal Solution

Thinking idealistically is a practical way
to start designing an effective solution.

Once ideal goal becomes clear,
the steps needed to design a solution also become clear.

The order of importance of preferences is
what forces you to balance your preferences with respect to one another.

No clear best path

Path now clear
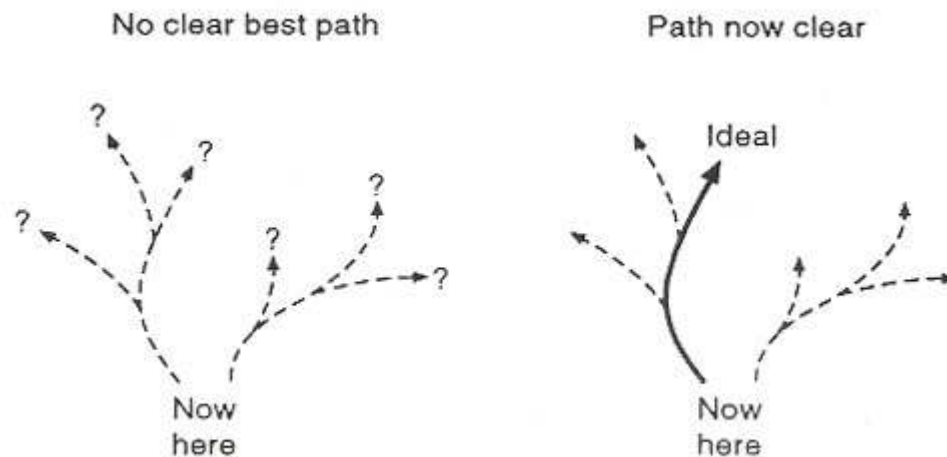
Heading In The Direction Of An Ideal Solution

After you create an ideal, pursue it.
Not with the goal of necessarily reaching the ideal,
but with the goal of giving you a direction in which to head.

Although you should clearly identify your ideal,
it's wise to be somewhat reserved about sharing an ideal with other people.
Many people don't appreciate the value of ideals.
In fact, they're often called "useless dreams"

As you create your ideal solution, don't be afraid to think big.
The purpose of thinking in ideal terms is
to expend your awareness of your possibilities.
The more ambitious your ideal solution is, the broader your awareness.
After all, the word ideal implies an absence of limits.

An ideal is like a compass that can keep you from getting lost.
It provides a general direction in which to head as you try to find your way
through the unknown frontiers you're exploring.
But don't confuse an ideal with a fantasy.
An ideal is limited to what is actually possible,
whereas a fantasy has no limits

Pursuing Final, Rather Than Intermediate, Goals

최종적인 목표를 추구하라

Pursuing Final, Rather Than Intermediate, Goals

Surprisingly often, people pursue a goal and then, after achieving it,
discover they were mistaken in assuming that reaching the goal
would automatically cause them to reach what they really wanted.
To avoid such a disappointment,
distinguish between intermediate goals and final goals.

Pursuing Final, Rather Than Intermediate, Goals

Identifying final goals often involves subtle and surprising issues,
so don't expect to identify your final goals in a single thinking session.
Be willing to re-evaluate your final goals at any time, always looking for
goals that deserve to be demoted to intermediate-goal status.

To increase your awareness of all your alternatives,
make sure your goals are not just intermediate goals.
Ask yourself,
"If I were to achieve this goal and absolutely nothing else,
would I be happy with the outcome?"
Focusing on final goals, instead of only intermediate goals,
often reveals other paths that lead to the same destination.
Keep in mind that final and intermediate are relative,
Not absolute, terms.

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Considering Indirect Approaches

간접적인 방식으로 접근하라

Considering Indirect Approaches

Henry Fleer tried to talk grocery store owners into selling his product,
A new gum he called Chiclets.
But the store owners pointer out they already had too much candy on their shelves;
They didn't want more. So, Fleer tried an indirect approach.
He offered to give boxes of his gum to store owners who would hand out
a free sample package to each customer.
The store owners were happy to give away to their customers something
the store didn't have to pay for. After trying the gum,
many customers asked the grocery store owners where they could buy it.
Of course, the store owners were soon buying Chiclets gum.

When you meet resistance, consider trying an indirect approach.
Rather than work harder, work smarter.

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Considering Indirect Approaches

Consider using indirect approaches to accomplish more easily what you would otherwise have to struggle to accomplish. The following indirect approaches are especially useful:

- Redirection
- Step-by-step
- Amplification
- Leverage

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Being Aware Of Hidden Goals

감춰진 목표를 인식하라

Being Aware Of Hidden Goals

- Desire to prove a point.
- Desire to hurt, prompted by anger.
- Desire to avoid what prompts fear.
- Desire to be appreciated, due to low self-esteem.
- Desire to compensate for feeling of guilt.

Such goals are just as real, and often more influential,
than the ones you think you're following.
Once you become aware of such goals,
It become easier to accomplish what you really want.

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Pursuing Multiple, Prioritized Goals

다양한 성격의 목표를 우선 순위를 정해 추구하라

Pursuing Multiple, Prioritized Goals

Splitting up a single goal into multiple specific goals allows you
to make your goals more specific, and therefore, clearer.
Deciding the relative order of importance of these goals
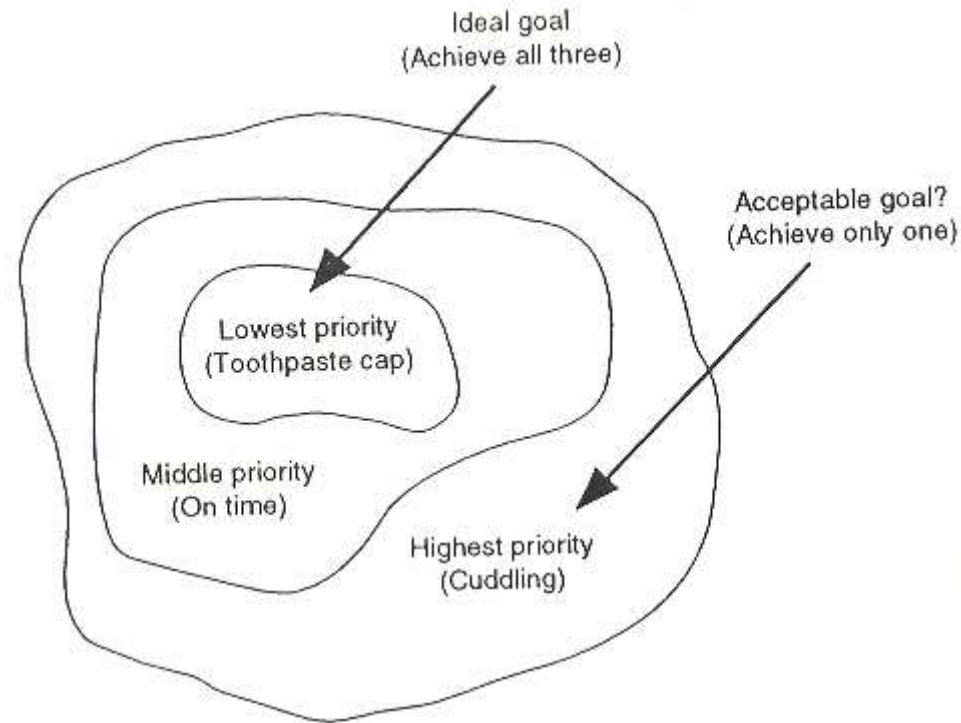broaden your alternatives.
To make a goal clearer, split it up into separate, specific goals,
And broaden it by putting the specific goals in order of importance.

For example, pretend that this is your prioritized list of specific goals
for improving your relationship:

- Most important: Cuddle up with your spouse more often.
- Medium important: Get your spouse to be on time,
  so you aren't kept waiting.
- Least important: Get your spouse to put the toothpaste cap back
  on the toothpaste tube after using it.

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Pursuing Multiple, Prioritized Goals

Ideal goal
(Achieve all three)

Acceptable goal?
(Achieve only one)

Lowest priority
(Toothpaste cap)

Middle priority
(On time)

Highest priority
(Cuddling)

A goal can be broadened to include creative solutions by
breaking it up into multiple specific goals and ranking
the multiple goals according to their importance to you.
Be willing to consider solutions that meet your most important desires,
yet fail to meet less important preferences.

Creating Non-Objects

비물질적인 해결 방안을 창조하라

Creating Non-Objects

Because our culture emphasizes the importance of objects,
We frequently try to solve problems by creating new objects,
Such as devices, toys, drugs, and machines.
We easily overlook the possibility of solving the problem by
creating something that isn't an object.

When you need to pour a liquid from a wide-mouthed container
into a small-mouthed container, you naturally think of using a funnel.
When there is no funnel, you're likely to consider creating a funnel
out of available materials.
A very different approach is to use a long thin object,
such as a spoon handle, to direct the liquid
(which follows the spoon handle)
Into the small-mouthed container.
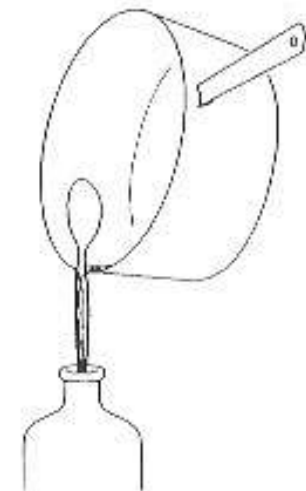
Creating Non-Objects

Here are some examples of non-objects
that have been created to solve problems:
- Waiting in a single line for multiple bank teller windows.
- Agreeing among family members that if someone become separated
  from the others in a large amusement park that the lost person will wait
  where he or she was last seen by the others.
- Driving on the right side of the road and stopping at stop signs.
- Preventing the spread of infections disease with a quarantine,
  in which the diseased person is isolated from others.
- Splashing water on a shower curtain edge to seal it to the shower wall

When creating new solutions, consider creating activities, techniques,
Strategies, conventions, processes, systems, representations, words,
and other "things" that aren't objects.
Their potential for solving large-scale and social problems is
greater than many people realize.

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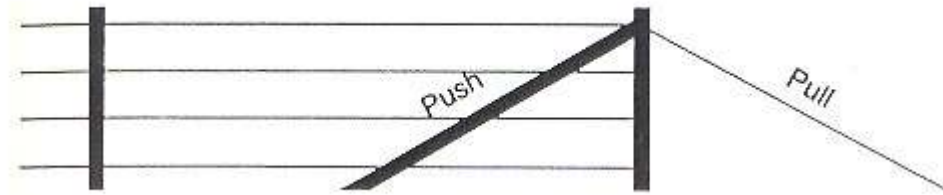# Considering Pulling
Instead Of Pushing

미는 방법보다 끌어당기는 방법을 생각하라

Considering Pulling Instead Of Pushing

Pulling is frequently more effective than pushing.

Have you ever noticed that the end post of a fence can be reinforced using Either a wire to pull the top of the end post or a diagonal post to push the top of the end post?

Whereas physically pulling offers the advantage of reduced mass, socially pulling offers the advantage of reduced effort.

Considering Pulling Instead Of Pushing

In spite of its advantages, pulling is not always better than pushing.
A pulling approach deserves extra consideration not because it's better,
but because it's commonly overlooked.

Pushing

Pulling
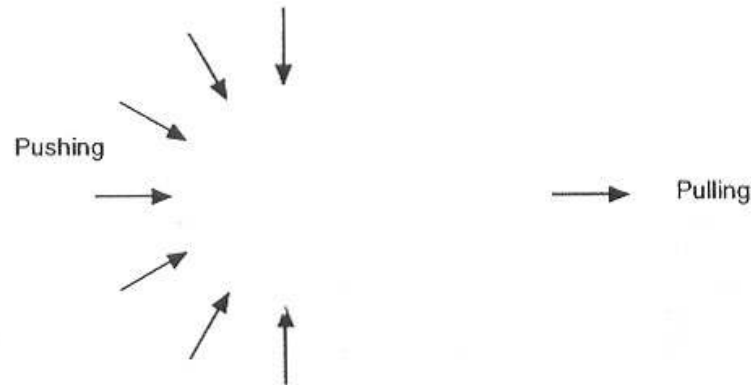
The next time you're looking for a creative solution,
look for ways to attract people, animals, plants, or objects toward
what you want, instead of pushing them away from what you don't want.
Extra effort invested in figuring out how to pull can reduce the effort
needed to bring about the desired change.