

Creative Models for Business and Management

(Models of human systems behavior and typical ways to enhance and control it¹)

Boris Zlotin and Alla Zusman
Ideation International Inc

Introduction

The following material represents one of the first attempts to systematically apply TRIZ approach to a non-technical area. We began collecting and organizing knowledge about the most successful practices related to personal and organizational improvements, economic, politics, and other social areas in the mid 1980s. We have included 63 creative recommendations with about 90 illustrations related to managing and enhancing human-based (individual or groups) system behavior developed in early 1990s and organized into a system similar to 76 Standard Solutions².

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¹ Translation from Russian. The original was published in *Journal of TRIZ*, devoted to Kishinev School of TRIZ, 94, Volume1 (9), pp.82-91.

² 76 Standard Solution is a knowledge base tool of Classical TRIZ developed by Genrich Altshuller in the mid-1080s.

1. Establishment, development, stabilization, transformation and elimination of organizations

1.1. Establishment of organization

1.1.1. Indirect way: let others to do your job

If a certain function must be performed (especially single purpose functions) and it is not efficient establishing a permanent organization for this purpose, create conditions favorable for self-establishment of a (temporary) group of people from readily available resources. In doing this, consider tapping into existing needs, or create a need.

Examples:

When Tom Sawyer had to paint a fence, he avoided the physical labor involved by getting his friends to do the job: he convinced them that painting fences was a privilege. Not only did they complete the task, they also paid Tom for allowing them to do the work.

Peter the Great couldn't move to his newly built Winter-Palace because all roadways were blocked by the debris from the construction. To quickly clear the roads at no cost, the mayor of St. Petersburg announced that surplus construction materials were free to whoever wished to take it. In a few hours the streets were clear.

1.1.2. Establishing a permanent organization

To establish a permanent organization, create conditions necessary for self-establishment. These conditions should involve building a steady flow of wealth³ or information that will attract people and motivate them to build an organization around the flow. To create a flow, develop or utilize an existing supply and demand system.

Examples:

When the centralized system of distributing goods in the former USSR crashed, an enormous amount of private and semi-private trade organizations (exchanges) were established from the pre-existing distribution systems.

Seed capital helps starting a business⁴.

People get information about certain pioneering ideas in science, technology or in arts and join their originators to help taking them forward.

³ Money, goods, etc.

⁴ A new example added in the process of translation.

1.2. Development (growth) of organization

To ensure an organization's growth, create positive (reinforcing) feedback loop, where every step in the organization's evolution increases its value in the eyes of society (or market) and its members that stimulates further growth and so on.

Examples:

A company that demonstrates successful operations is attractive to investors and customers. Revenue and investment improve performance, which, in turn, attracts more capital.

“Pyramid” schemes (illegal in many countries), are systems of making money that require an endless stream of recruits for success. Recruits (a) give money to recruiters and (b) enlist fresh recruits to create a bottom-up revenue source. The result is almost always inevitable: at best, the top-most walk away with a lot of money, while most recruits lose their investments.

1.3. Stabilizing organizations

To stabilize an organization and to protect it from negative change (including disintegration), initiate the homeostasis mechanism or negative (stabilizing) feedback loop to undesired change, i.e. create a situation where a change initiates forces that counteract that change.

Example:

A biotechnological company had a difficult time maintaining its work force. The use of outdated and worn equipment caused hazardous substances to be released in the air. Subsequently its employees developed allergic reactions. Instead of enhancing the working conditions by eliminating the source of the allergens, the management built a large parking garage and rented parking spaces to its employees. Employees elected to continue their employment in spite of the adverse working conditions because there was a shortage of parking places in the city.

1.4. Transformation of organizations

To significantly transform an organization (its structure, culture, personnel. etc.) divide the existing organization into parts (sub-systems) and then re-unite it in an optimal way. In particular, old connections (relationships) should be partially or completely destroyed and replaced with new ones.

Examples:

During the Russian civil war, English military ships arrived in the Russian port at Odessa to help fight the Bolshevik (Communist) invasion. However, the Bolsheviks devised a way to influence the sailors to disobey orders. The ship commanders discovered the plan and, in a single night, re-organized the entire crew. This had little effect on their ability to fight, as the sailors were well trained and the equipment on each ship was nearly identical. It did, however, eliminate the possibility of conspiracy and violence, because the sailors didn't know their new shipmates and no longer trusted anybody.

When an established and well-disciplined orphanage managed by a famous Russian teacher merged with a larger, poorly organized orphanage whose residents were undisciplined and violent, divisions were dissolved and then reorganized into groups that included children from both organizations. This action eliminated the violent connections between the members of the second orphanage and gave an advantage to the disciplined and better-organized members of the first orphanage.

1.5. Disintegrating (dismissing) organizations

To dismiss an organization, follow the steps below:

- Terminate the flow that originated the organization
- Disturb the organization's homeostasis, eliminating the negative feedback to change
- Create a positive feedback to desired change

Examples:

When the Prohibition law was revoked, the flow of illegal liquor begun by the Mafia was terminated; however, the homeostasis mechanisms were not destroyed. The Mafia survived and shifted to other illegal and lucrative operations.

An attempt to destroy the Communist power in the former Soviet Union after the August 1991 coup failed. Although the top administrative structures were destroyed, the majority of the top Communist leaders invested "party money" into new commercial endeavors, becoming actual owners of and decision makers within the most powerful commercial organizations

2. Motivating an organization or an individual to perform an action

2.1. Direct influence

There are three basic ways of influencing the subject:

- Forced administration
- Utilization of people's own needs, wishes or the creation of needs

- Utilization (or creation) of rational and/or subconscious motives

Example:

One way to make people obey is to exploit their negative human instincts, i.e. fear. Hitler employed such a method.

2.2. Influence through a mediator

2.2.1. Unbiased mediator

When it is impossible or ineffective to directly influence a subject, employ an unbiased mediator (an individual or an organization). One way to achieve such a mediating influence is through the use of rumors.

2.2.2. Mediator with credibility

When it is impossible or ineffective to directly influence a subject, employ a mediator (an individual or an organization) that is highly credible, well known, and/or popular.

Example:

An advertising agency working for an automotive company conducted a worldwide search for people having the same name as famous historical figures, e.g., Christopher Columbus or Admiral Bird. Pictures of these individuals were used in advertisements accompanied by words such as “Mr. Columbus has recently discovered the new Mercury.”

2.3. Influence through an agent

When it is impossible or ineffective to directly influence a subject, employ an agent acting on your behalf.

Example:

A dangerous criminal was arrested in a dance club by two policemen, without incident. Although several of the criminal’s friends were present and could have intervened, the arrest was carried out successfully because undercover agents in the club had initiated rumors that there were many agents present in the club and that resistance would be futile.

2.4. Influence through an overall system

When it is impossible or ineffective to directly influence a subject, act through the overall system of which the subject is a part.

Example:

Western Electric Company introduced a Caution Reward lottery. Each worker participated in daily lotteries, with prizes ranging from \$25 to \$100. If an accident took place, the lottery prize was reduced by half on the day of the accident, and no further lotteries were held that week. The injury rate dropped by 55% as a result of this method.

2.5. Making a subject a part of a well-controlled system

When it is impossible or ineffective to directly influence a subject, consider making him/her a part of a well-controlled group or organization.

Example:

Research psychologists have designed tests to identify how human behavior or opinion is influenced by a group. During the test, an individual is placed in a group that acts in accordance with certain pre-arranged conditions. For example: a group of children is asked about the color of a toy; all the children but the one being tested had been instructed to give the wrong answer. The ability of the child being tested to give the right answer in spite of the “opinions” of the group demonstrates his/her level of non-conformity.

2.6. Influence through an element of a system under control

When it is impossible or ineffective to directly influence a subject, consider influencing one or more of its elements.

Example:

Circus animal trainers have longed thrilled audiences by placing their heads into the mouths of lions. To ensure safety, the trainer usually pulls the lion’s lip over his teeth. Therefore, to bite the trainer, the lion must bite itself.

Other examples:

- *Influencing parents through their children*
- *Blackmailing or bribing an organization’s leader(s)*

2.7. Influence through an introduced well-controlled element

When it is impossible or ineffective to directly influence a subject, consider introducing a well-controlled element into the “system.

Examples:

Newborn chicks kept in an incubator have no knowledge about obtaining food. As a result, some die before discovering the food source. To prevent this, they introduce older chicks that have already learned how to find the food into the group.

To ensure a successful performance, ringers can be introduced into an audience to applaud and cheer.

Specially trained goats were sometimes used to lead livestock to slaughter.

2.8. Indirect influence

2.8.1. “Making a road” – The “Golden gate” principle

To induce a subject to act in a certain way, i.e. follow a behavioral path, create conditions that will make this path the only one possible, the most preferable, or the easiest to follow.

Examples:

An old-time war strategy recommends that instead of completely surrounding the enemy’s army, they should be left a “golden gate” by which they can retreat. Such an “honorable” retreat would result in far fewer casualties than if every enemy soldier was forced to fight to the finish.

In the battle of Stalingrad during World War II, Joseph Stalin refused to follow such a strategy. He chose instead to attack the German armies entrapped in the city. The fierce defense that ensued produced Russian losses much greater than would have resulted had a “golden gate” been available (according to George Zhukov, a respected and powerful Russian warrior), and two more months were required before the operation ended.

2.9. Influencing flows passing through the organization

When it is impossible or ineffective to directly influence a subject, consider influencing “flows” that the organization consumes, transforms, or produces.

Example:

To expedite the transition from the use of vacuum tubes to semiconductors, the U.S. government introduced a “vacuum tube tax” based on the total volume of vacuum present in a product or device.

3. Increasing the effectiveness of a subject performance

3.1. Replacing a stimulus with a stronger one

To enhance performance, consider replacing an existing stimulus (motivation) with a stronger one.

Example:

Initially, the anti-nicotine campaign for American youth emphasized the health dangers associated with smoking. Later, emphasis shifted to providing assistance to individuals who could not quit on their own, and counteracting advertising campaigns that implied smoking enhanced popularity, sex appeal, etc. Eventually, the image of non-smoking successful young people became widely accepted and desirable.

3.2. Introducing an additional motivation

To enhance performance, consider introducing an additional stimulus (motivation).

Examples:

A trade union in a German automotive plant was unable to persuade union members to attend meetings held after work. To resolve the problem, the union demanded that the plant manager permit the meetings to take place during working hours. The manager found a better solution: the meetings would take place after work and “door prizes” would be awarded at each meeting; the grand prize was a car. This idea proved successful – people didn’t mind staying after work, and the expense incurred by the management of one car was considerably less than halting production for an hour.

In the early 20th century, American circuses impressed spectators with lion shows: the wild animals roared and tried to attack the trainer, who bravely “tamed” the beasts. Using young animals in the performance was dangerously unpredictable. Old animals, however, moved slowly and thus did not appear dangerous enough. The solution was to apply an electrical voltage to the floor of the cage. The electrical shocks “motivated” the old animals to jump like young beasts.

3.3. Introducing positive (reinforcing) feedback loop

To enhance performance, consider introducing a positive feedback (reinforcing) loop that continuously enforces the desired action. In other words, create conditions in which a small impact can cause a snowball (avalanche) effect.

Example:



Typical positive feedback loops are addictive (and destructive) behaviors such as gambling, alcohol, or drugs. On the constructive side: a passion for learning, enjoyment of the arts, and being creative.

3.4. Creating by-systems

To enhance performance of the subject (system), consider integrating it with another subject/system to form a bi-system.

3.4.1. Homogeneous bi-system: combining two identical subjects (systems) or splitting an initial system into two identical portions

Example:

A pair of mountain climbers can climb more safely than each climber alone: while one climbs up, the other ensures his/her safety.

3.4.2. Complementary bi-system: one subject (system) complements another, multiplying the advantages

Example:

An evil scientist wanted to eliminate a colleague from whom he had stolen an idea; a gangster wanted to eliminate a rival. They “exchanged” subjects and, as a result, had impenetrable alibis: nobody could suspect the scientist of having a motive to kill the gangster, and vice versa.

3.4.3. Antagonistic bi-system: combining two subjects (systems) with opposite functions or splitting a system into two and assigning opposite functions to each portion.

Examples:

This combination is well known in many contexts: a merry clown and a sad one, “good” cop/”bad” cop, etc.

When a new weapon is being developed, a special “counter-force” team is established to search for counteractive devices. Based on their findings, the weapon team can perfect its design.

3.4.4. Towing bi-system: a new promising, yet inefficient system is combined with an older system. This extends the life of the older system, while allowing the new system to grow in efficiency.

Examples:

A rigid and forced administration system permits a limited number of free market elements to improve certain situations.

Large traditional corporations that lack dynamism and the ability to compete acquire new eCommerce companies.⁵

3.4.5. Compensating bi-system: combine a subject (or system) with another one that can compensate for potential dangers associated with the initial system

Example:

A sleeping pill is covered with a small amount of an emetic substance, which is inactive when a normal dose is taken. However, if the user ingests too many pills, the accumulated substance will cause the involuntary expulsion of the pills from the body and prevent a fatal event.

3.5. Creating poli-systems

To enhance performance of the subject (system), consider integrating many of them into one, or splitting an existing system into multiple portions.

Example:

At Marathon, Grecian army defeated the much more powerful Persian army by utilizing phalanx – an arrangement of soldiers organized into 16 close-knit layers. Persian soldiers were used to fighting individually and could not hold back the combined forces, although individual Persian soldier was no weaker than individual Grecian soldier was.

3.6. Introducing a structure

To enhance performance of the subject (system), consider introducing a certain structure to the system and/or its internal connections.

Example:

For centuries, the Greek phalanx was considered to be the best military arrangement; however, it was replaced by Roman legions. A legion is a phalanx divided into cohorts, which were then divided into maniples representing a small phalanx able to act

⁵ A new example added in the process of translation.

independently. Each maniple row of soldiers carried different arms (internal structure) to perform at different stages of a battle.

3.7. Matching (mismatching) subject's sub-systems

3.7.1. Matching

To enhance the performance of a subject (or system), consider matching its elements. In particular, consider matching rhythms of actions, compositions, cultural elements, and other system parameters or characteristics.

Examples:

Delta Airlines pioneered in a very efficient flight schedule formula. A number of planes from various locations arrived at the airport almost simultaneously. After a short period of time to allow passengers to make connections, all the planes depart. This procedure is repeated several times a day.

Spies usually enter their target country through a third country. For example, it is very difficult to introduce a Russian agent into the United States directly from Russia. For example, Russian agents Abel and Longdale entered the United States through Britain and Canada, respectively.

3.7.2. Shifted matching

To achieve additional benefits, a partial mismatching (referred to as shifted matching) can be utilized. Partial mismatching of particular system parameters can be used to direct useful or harmful flows passing through the system.

Example:

The Soviet foreign minister appointed by Gorbachev (who initiated perestroika) wanted to remove the staff that remained from the previous administration. He could not do this openly, however, because the former foreign minister was still very powerful in the Soviet communist establishment. Instead, the new minister invited the most important staff members to join him on a trip abroad. On his return to Moscow, the minister unexpectedly ignored a special diplomatic passage, forcing the group to proceed through regular customs; the majority were caught with illegal contraband and forced to resign.

3.8. Dynamization of sub-systems

To enhance performance of the subject (or system), consider “dynamization” of its elements, i.e. making them dynamic, to improve controllability.

Examples:

A phalanx already engaged in battle is uncontrollable. A legion, on the other hand, is much more controllable through its smaller maniples, allowing for various maneuvers, management of reserves, etc.

To ensure constant growth and competitiveness, some corporations establish and maintain a “climate” for change, reorganizing staff around even if there is no immediate need for it.

4. Eliminating undesired effects

In a situation where an undesired effect (or action) is present, consider a triad of undesired actions consisting of the undesired action itself, its cause, and the undesired consequences. Interestingly, an undesired effect can be eliminated if at least one element of the triad is removed, which means that there are always at least three options to consider. When selecting an option, consider the following:

- It is preferable to eliminate the cause of an undesired effect rather than the undesired effect itself unless it has several causes
- Eliminating an undesired effect means destroying an associated Su-Field model⁶.

4.1. Eliminate the causes of an undesired effect

Every undesired effect has at least one underlying cause. Therefore, it should always be determined whether eliminating the cause is easier than dealing with the undesired effect itself.

Example:

In a group of young piglets a “power hierarchy” must be established. To build this hierarchy, the piglets fight to reveal the strongest among them. Unfortunately, these fights cause injuries and hinder weight gain. To prevent fights, an older, stronger piglet is introduced into the group; this piglet immediately assumes leadership and establishes a hierarchy.

4.2. Destroy undesired “Su-Field model”

4.2.1. Exclude (or remove) the source of an undesired effect from the system

Consider the possibility to excluding the source of an undesired effect from the system. If this is not possible, consider moving the source (at least temporarily) into a different place while trying to maintain its useful functions, (if any).

⁶ Although Su-Field analysis and modeling (an analytical tool of Classical TRIZ) is usually related to technological systems, some analogies can also be drawn for human systems (translator’s note).

Note. If removing the source of an undesired action prevents certain useful functions from being performed, formulate a secondary problem to be resolved (using ARIZ, for example).

Example:

Chemists studying tellurium compounds ignored safety instructions and ate at their workstations. As a result, they ingested a certain amount of tellurium compound, which was transformed internally into a strong-smelling substance. To protect their coworkers, the chemists were relocated to a remote place for several months until the substance completely decomposed.

4.2.2. Exclude the subject of an undesired action from the system

If it is not possible to remove the source of an undesired action, consider moving the most sensitive (breakable, expensive, etc.) or endangered elements to another location (or system) while trying to maintain their ability to perform the useful function(s).

Note: If removing the source of an undesired action prevents certain useful functions from being performed, formulate a secondary problem to be resolved (using ARIZ, for example).

Example:

After World War II, Americans tried to make use of German chemical patents. To their surprise, however, many processes didn't emerge as described in the patents. Moreover, in some cases attempts to implement them caused explosions. It was later realized that valuable information had intentionally been omitted from the patents.

4.2.3. Isolate the subject from the object of harmful action

4.2.3.1. Introduce a mediator

If the source of an undesired action cannot be excluded, consider isolating the subject from the source by introducing a third party mediator.

Example:

Separating warring troops using United Nations forces.

4.2.3.2. Introduce a mediator that is available as a resource

Consider the possibility of using an available resource as an isolating mediator.

Example:

When a penalty is in effect during a soccer game, the defending players create a “wall” between the goalie and the player performing the penalty. A Russian soccer player named Malofeev invented a way to deceive the defenders: the players of the attacking team create their own “wall” to obstruct the goalie’s vision and prevent him from seeing the puck being hit and the direction in which it is moving (the “wall” disappears the moment the puck is hit).

4.2.4. Counteraction (compensation)

4.2.4.1. Provide counteraction with the use of the same undesired action

Consider dividing the subject (or system) into portions so that their undesired actions compensate for each other.

Example:

In the movie The New Don Juan, a servant pretending to be Don Juan simultaneously receives challenges to duel some fifty gentlemen. To handle the situation, the servant suggests that the gentlemen fight among themselves to identify who will be the first to fight him. As a result there was nobody left to fight the clever servant.

4.2.4.2. Provide counteraction by combining the undesired action with another undesired action

Example:

In a Jack London story, two gold prospectors decided to duel for practically no reason at all. The duel was successfully averted when it was announced that the winner would be hanged.

4.3. Preliminary anti-action

4.3.1. Anti-action

If an undesired action is inevitable under certain conditions, provide for a counteractive action in advance.

Examples:

The pirate hero Captain Blood ordered his deputy to fire a “blank” shot from the ship’s gun before leaving to negotiate with the enemy. During a critical moment in the negotiations, the gun sounded. Captain Blood explained that the shot was a

warning and that if they (the negotiators) did not return to their ship immediately, the enemy ship would be destroyed. This trick saved the negotiators' lives.

An Englishman insured his cigars against fire damage. After smoking them, he filed a claim to collect on the insurance.

4.3.2. Negative feedback (stabilizing) loop

If it is known that an undesired action can occur under certain circumstances, consider creating conditions that can initiate a negative feedback loop directed toward eliminating this undesired action or reducing its harmful consequences.

Example:

Environmental protection organizations cannot monitor the activity of every company capable of impacting the environment. For this reason, the U.S. has instituted the following monitoring system: each territory has a limit pertaining to the release of hazardous elements from all companies in that territory; therefore, to stay under the limit, the companies must monitor each other. Moreover, to obtain permission to expand production or begin new production, the emissions for the existing production must be reduced.

4.4. Increase the strength of a human or an organization to an undesired influence

4.4.1. Preliminary strengthening

If an undesired action can occur under certain circumstances, consider creating a strengthening environment that can prepare a human or an organization to overcome the associated difficulties.

Example:

In many ancient tribes, a boy had to endure a demanding initiation process before being recognized as a man.

4.4.2. Create “centers of resistance”

If an undesired action can occur under certain circumstances, consider introducing a particularly strong group or an individual that can form either an internal “skeleton” or an external “armor” to ensure strong resistance.

Examples:

In Roman legions the last (third) layer of soldiers in a maniple included the strongest and most experienced soldiers. These soldiers were the last to enter the battle – they supported the preceding layers and prevented them from retreating.

In a medieval military formation, heavily armed knights on horseback formed a protective perimeter around the lighter armed soldiers.

4.4.3. Create a group (organization) of “extreme strength”

If an undesired action can occur under certain circumstances, consider building an organization in such a way that provides increased strength. In particular, especially strong and stable bi-and poli-systems are recommended.

Example:

The most efficient tactics for fighter airplanes suggest the use of pairs; while one plane attacks, the other protects it from counterattacks.

4.5. “Draw off” an undesired action to another object

An undesired action can be “drawn off” to another object - one that is already available or that has been introduced exclusively for this purpose.

Examples:

To release stress, a Japanese employee can “kick the bottom” of the rubber copy of his boss.

During World War I, German spies introduced a very perplexing puzzle into the English military weapon development center. The time that was wasted as people tried to solve the puzzle delayed schedules work for nearly two weeks – longer than would be achieved from an explosion or other sabotage. The Rubik’s Cube and certain computer games have had a similar impact.

4.5.1. Draw off excess energy

Example:

An overactive child can be a heavy burden for his parents. Things are substantially easier, however, if they invite a friend to come over and play with the child.

4.6. Switch off the undesired action

Consider creating conditions under which the harmful effect cannot occur.

Examples:

For many years, the existence of nuclear weapons were credited with preventing World War III, because everyone...even the most powerful countries...were vulnerable.

Freedom of Speech makes it nearly impossible to cover up every indiscretion, forcing politicians to watch their behavior and protect their reputations.

4.7. Enforce an undesired action

Consider increasing the intensity of a harmful effect to the point where it is no longer harmful.

Example:

In the former Soviet Union, a woman presented a written complaint against her alcoholic husband to his supervisor. If she filed an official complaint, the supervisor might be punished as well. To avoid liability, he took the complaint and made a note on it to cancel the husband's bonus, remove his name from the municipal apartment waiting list, reschedule his vacations to the winter, etc. The supervisor then left the room, intentionally leaving the note visible. When he returned, both the woman and the complaint were gone.

4.8. Eliminate the consequences of an undesired action

4.8.1. Cushion in advance

If an undesired action can appear under certain circumstances, prepare the rescue team and equipment ahead of time.

Example:

Insurance companies are prepared to deal with fraud. The clever gentleman who insured his cigars against fire damage, then smoked them and filed a claim for damages was convicted of intentional damage of insured property – a serious crime.

4.8.2. Compensate for undesired consequences

If an undesired action cannot be avoided, consider neutralizing its harmful results.

Example:

During the 1937 repression in the former Soviet Union, a pilot confessed that he had sold secret drawings to a spy to avoid further torture. He was convicted and sentenced to ten years in prison. Once in prison, he immediately began writing letters to all authorities remotely connected with his case, stating that the

drawings were licensed to several countries and therefore did not constitute a state secret. After a while, he was released.

4.8.3. A prize for a loser

If neither the undesired action nor its consequences can be avoided, consider “sugar coating the pill”, by easing negative emotions and helping to cope with the losses.

Example:

Awarding a prize to the loser in a contest.

4.9. Weaken (partially eliminate) an undesired action

4.9.1. Weaken an undesired action by distributing or prolonging it.

Example:

Insurance companies insure one another against situations when the cost of the claim would be exorbitant, distributing the losses.

4.9.2. Slacken an undesired action in local places or for specific periods of time

4.9.2.1. Rushing through

If you expect a subject will resist specific changes, try to make these changes as quickly as possible.

Example:

It is well known that overnight coups are often successful.

4.9.2.2. “Boiled frog” effect⁷

If you expect a subject to resist specific changes and you do not have the resources to control the situation, implement these changes very slowly so that they will go unrecognized until it is too late.

4.9.2.3. “Release”

⁷ A frog placed in a jar with hot water will jump out. However, if a frog is placed in a jar with cold water that is slowly being heated, the frog cannot identify the moment when the water is too hot and will subsequently be boiled.

If an undesired action cannot be avoided, consider “channeling” it by arranging for conditions that will provoke its “release” at convenient moment, at convenient location, or with a convenient “victim”.

Examples:

In medieval times, many activities that were usually forbidden were allowed during special carnivals to help release dangerous “energy.”

In ancient times, a special scapegoat was selected to accept all human sins and then be sacrificed.

4.10. Convert harm into benefit

If the undesired action cannot be avoided, consider ways to convert the harm into a benefit.

Example:

The famous English play writer George Bernard Shaw found a creative way to protect his privacy while on a sea cruise. He had an infallible ability to detect shy women. He identified such a woman on the cruise, and asked if she would mind if he sat next to her, and silently worked on his new play. The woman was thrilled, and took it upon herself to protect him, telling all who approached that he couldn't be interrupted while he was working.

5. Solving problems related to obtaining information

5.1. Indirect ways

5.1.1. Eliminating the need for information

If it is necessary to detect a fact or event, or to measure a certain parameter related to a group or an individual, try to change the situation in a way that will make the detection/measurement unnecessary.

Example:

In some cities, instead of checking if bus or train passengers have paid for the ride, a lottery is arranged, using the transportation tickets as lottery tickets. As a result, the number of tickets sold has increased substantially.

5.1.2. Replacing the subject with its model

If it is necessary to detect a fact or event, or to measure a certain parameter related to a group or an individual, consider replacing it with a model or copy, e.g. a photograph, statistical description, image, instead of working with the real subject.

Example:

To create an impression of a large noisy crowd at the theater stage, several people continuously repeat the word “abracadabra” or similar to it.

5.1.3. Use detection instead of measurement

Consider replacing a problem related to measurement with a problem of detection (or multiple detections, if necessary) of system changes.

Example:

In Northern countries, people use reindeer dogs to pull sleds. It has been discovered that some dogs “cheat” - that is, pretend they are working very hard while not applying any effort. Instead of measuring the effort applied by a dog, drivers tie a thin thread to the reins. If the thread remains intact, it indicates that the dog is not pulling the sled.

5.2. Obtaining qualitative information (detection) or quantitative information (measurement) of a subject’s status

5.2.1. Utilize available information resources

If it is necessary to detect a fact or event, or to measure a certain parameter related to a group or an individual, consider using informational resources available within a subject - that is, utilize the subject’s ability to serve as a source of easily-detected information fields.

Examples:

A thief broke into a department store at night, stole several items, changed his clothes, then waited for the store to open, after which he freely left the store. To make sure he was not followed, he roamed the city before returning home. To his surprise, the police was already waiting for him. It then occurred to him that he had forgotten his ID in his discarded jacket.

A creative solution to the traditionally difficult problem of collecting taxes was instituted in Chili during Pinochet’s reforms. Every business was supposed to pay taxes on its net profits. To minimize his taxes, a business owner had to submit detailed information about each of his vendors who, in turn, were required to do the same for theirs. When the information was entered into a computer system, all deals could be identified.

5.2.2. Activate informational resources

If the inherent informational resources of a subject are insufficient, i.e. unable to provide qualitative or quantitative information regarding the subject's status, consider influencing the subject so that its change in status becomes a source of useful information.

Example:

The Chilean tax collection system described above had one loophole: it is difficult to track down small retailers' sales unless every consumer requests a receipt. To motivate customers, a special lottery was organized using sales receipts as lottery tickets. The tax collection system became complete as a result.

5.2.3. Build an informational Su-Field model

If required quantitative or qualitative information about a subject cannot be obtained by direct means, consider building an informational Su-Field model by introducing a new object (subject) connected with the given subject and which can be a source of easily-detectable informational fields.

Examples:

To show that a new automobile had an extremely smooth ride, a commercial was produced in which a glass filled with a destructive acid was placed on an expensive fur coat lying on the back seat.

In another commercial, a record player was placed on a front seat. The music played uninterrupted while the car accelerated.

In a third commercial, Bart Starr, a famous football player, was shown being shaved by a barber in the moving car.

The next commercial showed a container with a very sensitive explosive material on the back seat (to prove that the explosives were real, the car was exploded in the end of the commercial).

The most impressive commercial showed a jeweler cutting a diamond in the back of a car as it traveled along a bumpy road. (Saturday Night Live produced a parody of this commercial, where a rabbi circumcising an infant replaced the jeweler).

5.3. Obtain hidden (secret) information via self-revealing

If required information is kept in secret, try to create conditions that will force the subject to voluntarily reveal it.

Examples:

“Finally, we will find out who is the traitor! Look, here comes the horseman who will reveal the truth,” said Robin Hood to his friends, taking a seat under a large tree. “Hey John, why are you rushing off? Traitor!” yelled Robin as he shot an arrow into the back of the escaping bandit. By the way, the horseman had nothing to do with the traitor at all . . .

Flyers placed at each entrance to a multi-apartment building announced that exterminators would arrive around noon the following day. The flyer included instructions for tenants who would not be home to leave a bucket outside the door, which would be filled with insecticide. The next day, every apartment with a bucket outside had been robbed. The announcement was merely the method used by burglars to obtain the information they desired.

5.4. Conceal information

5.4.1. Camouflage

If it is necessary to prevent a subject (or information) from being revealed, and hiding it is not possible, consider placing it among similar subjects or make it indistinguishable from the environment.

Examples:

In H. Chesterton’s story Broken Sword, a murderer trying to hide a dead body, ordered the start of a doomed-to-fail battle in which many dead bodies resulted.

In a story by Hans Christian Andersen, a maid, in order to reveal where a fairy dog is taking her princess at night, secretly follows the dog and marks the door of the house with a cross. The clever dog noticed the mark, however, and put similar marks on all the neighboring houses.

5.4.2. Conceal information about upcoming event

If it is necessary to conceal information about an upcoming event, and it is not feasible to completely prevent an access to this information, consider creating “informational noise” by allowing the release of (or easy access) to a substantial amount of contradictory information. This allows the true information to be hidden in the “noise.”

Example:

During World War II, it was vitally important to keep secret the time and place of the allied invasion of Europe. However, it was very difficult to hide an operation of such magnitude. To conceal information, a huge misinformation campaign was

launched: all possible channels of information (especially German spies that had been freed after their identities were revealed) were “loaded” with contradictory information containing several suitable places and timeframes for the invasion. When the war was over it was discovered that the Germans had intercepted some 100 different messages, the one true message having been “lost” among them.

5.4.3. Emphasize informational resources

If it is necessary to conceal a subject or information related to its status, consider separating and emphasizing the portion that is rich with informational resources.

Example:

During World War I, English military radio operators were moved from battle ships to civilian ships. Each operator’s handwriting was known to the Germans, thus creating the illusion of the (wrong) location of the English naval ships.

Note: The above recommendations represent an intermediate stage in the development of non-technical creative knowledge base. Important sections such as *Methods of intrigue and contra-intrigue, Methods of concealing information and misinformation, Management resources* and others are still missing. Also, a special guide containing psychological and social effects is in development.