

# The Art Of Systematic Thinking and Applying The Science Of Change

## Morphological Creativity

Thinking efficiency improvement and error reduction. To innovate, invent, research, design, structure, applying the science of change.

## Citations

Seminars, workshops, ROI

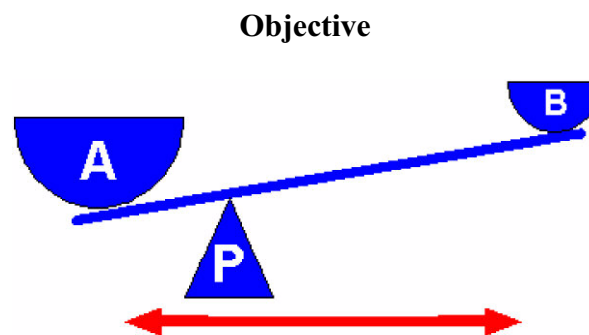
Dedicated workshops

Business advisory sessions

Analysis and solutions, performance improvement

## Projects

morphological leadership of problem solving teams. To reach an objective. ROI optimization of project. By agreement.



A = competition's strength, B = your company's strength, P = leverage point moved by innovation

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# Morphological Creativity

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Morphological Creativity offers more research and design power than common, non-morphological creativity. In morphological creativity facts, data, and vision interact with actions taken and adopted procedures in an integral manner. While accidental discovery remains possible, the real strength of morphological creativity and research lays in its mapped out, step-by-step approach to solving problems and creating designs.

Morphological creativity is powered by General Morphology, the science of change, in its universality.

Morphological creativity has been recommended by the brightest minds of the last 100 years. Its power in research, conceptualization, problem solving and universal application has been unsurpassed. (F. Zwicky, A. Einstein, E. Hale, and many more.)

In research and problem solving, morphological creativity allows to start at almost any point of knowledge, similar to developing a route on a geographical map. Prospective Thinking coupled with Guided Intuition are the navigator's direction finders allowing for progress even in these all too common situations where facts are missing and decisions pressing.

A vision can be developed like a map, patch by patch. Creative Morphology supplies rules and principles like a rolling carpet. Progress is meanwhile anchored on pillars of knowledge. Creative Morphology constantly enlightens new areas for discoveries and insight, and blasting away obstacles on the way to the goal. Morphological creativity tests whether a route will be counterproductive, thus eliminating investment into "black holes" of no return.

A team guided by a creative morphologist will within a short time be more consistently productive than the single genius, and be an investment that is much safer from many angles of view.

In common, non-morphological creativity co-operating brain power is added. Understanding morphological creativity enables team members to multiply their power. The ideal team size is maintained from 5-7, members may participate in different teams to maximize knowledge and efficiency for the task at hand.

Morphological creativity should be employed whenever matters are complex, new ways are being sought or training programs (education at large) are being developed. Morphological creativity is not employed after the fire breaks out. It is used to design a sophisticated training program for fire fighters.

Morphological creativity is not so much a "last resort" when the danger zone has been reached. It is an insurance into knowing what to do when a critical situation arrives. It supports foresight and development procedures for products, services, organization.

Leaders with delegation abilities prefer an organized vision - a map of progress. Using morphological creativity is a more demanding approach than the common creativity approaches - whatever their names. Leaders reject smart communication which is often simply vapor ware - hazy promises - obscuring the real problems.

Rules and principles of change and its science - General Morphology - must be known and applied in a creative way, using Creative Morphology. These rules and principles of change will not vanish if ignored. They surface in every surprising result, be this positive or negative. The know-how is a lifelong resource.

Morphological creativity is a form of "brain energy" that "lasers" trains of thought into assemblies, systems, and creations of high efficiency and low loss. Morphological creativity is independent of the kind of application and field of knowledge - hardware, software, "brainware".

For more information email morphologist

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## Typical application fields of Creative Morphology

- engineering    machinery, vehicles, construction, processes, software, etc.
- architecture    networks for goods, data, procedures; containers for people, data, goods; insurance; more.
- structuring    towns, marketing, research, knowledge, economics, more.
- problem solving    complex problem clusters involving technology and people.

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Source:            <http://canmor.tripod/learn2e11.pdf>

Updates:          <http://go.to/canmor>, file down12.htm

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# Citations

## Ultimate Mission:

### Overcoming the aberrations of the human mind

Dr. Wayne Gruner

Gruner's opinion on Zwicky's development of General Morphology, seminars held at the Cloudcroft airbase near Alamogordo, arranged by chief scientist of US air force Dr. Knox Millsaps.

Dr. Wayne Gruner, program director for physics at the **National Science Foundation in Washington D.C.** about (Zwicky's) seminars covering the subject of the dangerous effects of human aberrations on the state of the world:

"Aberrations (of the human mind) dispelled

All are aware that, from the standpoint of society, scientific research has a dual motivation - pragmatic and idealistic. The former is obvious; the latter generally turns out to be very difficult to discuss incisively. Part of the difficulty, however, may be removed by Fritz Zwicky's observation that: "The great social contribution of science has been that of dispelling aberrations of the human mind."

To those who imagine that "dispelling aberrations of the mind" is the same as alleviating ignorance, we may point out that aberration goes beyond ignorance. I take Zwicky's remark to be a profound one containing the idea that ignorance per se is much less dangerous than the myths, superstitions, slogans, and like synthetic constructs with which mankind frantically stuffs the void of mere ignorance presumably to escape acknowledging the existence of any void.

The irrational urge to compound ignorance with superstition must be reading of "aberrations of the human mind" in Zwicky's context. Does not history bear him out?

Perhaps by taking Zwicky seriously we can develop some criteria as to the level and the kind of scientific research which is required to meet this therapeutic need of society. We will advocate research addressed to those areas of ignorance which one can recognize as the immediate occasion of virulent aberration. One may cause oneself in private with the enumeration of these. In addition, some level of research and scientific teaching is desirable to instill appreciation of the method and of its past and present role in dispelling aberrations.

Nothing is here said about the pure aesthetic satisfaction which is conveyed by science, and which I regard as the other important component of its idealistic motivation. "

# Special Mission of Creative Morphology

by Hermann Holliger

C.M is taught by the Morphological Institute Canada:

- The Goal of Creative Morphology: To structure creative thinking processes methodically.
- The Objective of Creative Morphology: To create integral systems. Systems which are free of coarse thinking errors, and which will not produce results due to thinking catastrophes. (Catastrophes challenge survival)
- The Sense of General Morphology: To deliver a useful contribution to the survival and development of humanity.

Translation: Emil Zahner

## Nature and change of material and intellectual structural correlations

### Morphological Research

Prof. Dr. Fritz Zwicky, ETH, 1956

Morphological Research concerns itself - as its name implies - with the shapes (Gestalt) and structural correlations of fields of problems. For instance fields of material objects, of phenomena and fields of ideas. ("Field" is here not used in its mathematical - physical sense, rather in the modern sense of logic)

Morphological Research implies the following two relevant circumstances:

The goal of Morphological Research is the development of its own special methodology of a general and global nature.

A Morphologist has his individual philosophical composure towards all situations in life, and has a will of his own to act.

The relevant characteristic of a morphologist's philosophical view lays in his immediate interest in the relations between all things and all appearances, which he endeavors to research in a general approach with great commitment.

The relevance of the morphological methodology is in the development of analytical and synthesizing methods for deriving the totality of all possible solutions of sufficiently defined given problems. This methodology shows the way to accomplish - along certain validation principles for the totality of all solutions - for selecting specific solutions.

# How to learn Morphological Creativity

## Workshops and seminars

### Workshops

present examples. Problem and solutions and their morphological interdependence. Workshops operate with limited theory. They will show most important micro steps.

- Workshop for Educators (E) 6 hours, 1 day

For educators who want to integrate some examples without specializing in teaching General or Creative Morphology.

- Workshop for Beginners (B), 6-7 hours, 1 day

public or internal, cost and time reduced, it provides insight and enables evaluation of the system itself, and immediately applicable tools. Application starts immediately.

- Workshop for Morphologists, (M), 6 hours, 1 day

for people who have attended a full seminar and are practising the morphological approach in their work. The extension will cover more on prospective thinking, error and risk research, and more.

- Seminar, full, about 20 hours, 2 1/2 - 3 consecutive days

Introduction to Creative Morphology. This seminar delivers the foundation for immediate application of the morphological approach to research and development in any field. The morphological micro steps will be explained together with the "enemies of clear thought". It enable self-study to further enhance morphological thinking and creativity.

Seminars and workshops will be held on demand.

Spoken languages: English, German.

## Seminar and Workshop Cost

Seminars and workshops are usually stand-alone events. Alternatively they can be coupled to a project. This speeds up the know-how. Sequential and parallel company wide internal education in Creative Morphology is available.

An advance payment for out of town expenses is due at the time of signing the contract. Fees are to be paid in advance, in some cases these can be split onto credit cards instead. Amounts below \$500 cannot be split.

Public educational organizations pay a flat fee independent of the number of students attending.

Territories: North America, Europe.

## Seminar and team leadership ROI guidelines

Cost saving as a result of morphological problem solving guidance will pay for educational cost within 1 -3 month typically, if the seminar is couples with a project. (Morphological guidance of a team involved in innovation, invention, research, structuring, conceptualization, implementation, etc.)

### Dedicated seminars

- **Customer attraction Seminar**

The seminar analyses the morphology of forces which are converting prospects into clients or are driving them to the competition. The analysis will reveal the priority of steps to be taken guided by the priority of "lowest cost & fastest results first", and follow up steps. It covers world wide marketing, product or service design, after-sales assistance, and maintenance. The focus will be selected by the company who signs up for this internal seminar.

- **Sales and instruction analysis workshop**

It covers literature, instruction manuals, and other documents the company delivers to the customer or distributor. The workshop analyses an exporting company's sales literature (at large) and user instructions (manuals, teaching and introduction, etc.). The result is better distributor / customer information and more reliable and much clearer instruction media for sales, distribution, maintenance personnel for own, third party repair shops, or customer's repair shops. A specialized measure to attracting and holding customers, individual business or brand.

- **Patent review, fast inventing, and other workshops**

Guarding against a competitor's attack using variant reinvention.  
<http://canmor.tripod.com/prog1e.htm>

### Business advisory sessions

in the form of consultancy in these sessions cover certain aspects of the business are being analyzed, discussed and researched for improvement. An example could look like the table below, or completely different.

<b>Relations table (col. A)</b>	<b>Business radiate (col. B)</b>	<b>Solution (col. C)</b>
<b>Differentiation</b>	Solution offered	Solution needed
<b>Products, services</b>	Cost of performance	Perceived value of performance
<b>Credibility, good will</b>	Business to client interface	Assurance of quality and reliability
<b>Knowledge &amp; know-how level</b>	Serious or bogus	Straight, clear or traps, screwing

Column B could be a small business, a department. Columns C could be a distributor, walk-in client, individual client, another department, or a subunit in the own department.

Clients seeking advise should prepare a sketch of who is included and who is not involved. Grey areas are permitted.

Business advice is rated per day (8 hours), 100%; 1/2 day 60%; 1 hour and part of it 20%. Out of town expenses and travel time may be added. Periodic sessions can be contracted.

# Glossary

## **Creative Morphology:**

How creativity operates, interaction of method and intelligence. How change of method might change obtained results. Error research

## **Morphological Creativity**

What to change in a system and in which order to obtain new solutions, and break through thinking blockades.

## **General Morphology**

The science of change in any field. Principles and rules that govern change. Evolutionary and creative change. (see also Zwicky, Holliger)

## **Special Morphology**

Morphology of a field of things. (Morphology of vertebras, stars, crystals, triangles, languages, etc.

## **Energo-cybernetic morphology**

Basically researching for the point of change which will strongly alter the behavior of a system with lowest change energy input. Avoids counterproductive measures.

## **Rate of morphological change**

The rate (periodicity) at which a specified system point must be changes again to assure good performance. Example: The yearly budget seen as a point of change. Amount of venture capital in a new enterprise.

## **Static morphosis**

Disassembling intact system to its smallest components, which then can be reassembled into an entirely new system. The system is closed to the environment during this transformation time. Example: From caterpillar to butterfly.

## **Dynamic morphosis**

An intact system changes its characteristics completely while remaining functional. An irreversible example is the frog.

## People

F. Zwicky, professor of astronomy, California – USA, with many patents in rocket science, invented artificial curly yarn, lead inventor's teams, director of research at Aerojet Consulting, student and friend of A. Einstein. Founder of Morphological society, author of various books on innovation and research, clear thinking, e.g. Research and inventing in morphological world.

H. Holliger, professor of mathematics at ETH, Zurich, Switzerland wrote a first draft on General Morphology (in German language). The leading morphologist in Europe and root



educator.

J. W. Goethe, he coined the word morphology, the logic of change. He applied it mainly to Geology. He found the missing morphological link between ape and man skeletons. He also was a great writer.

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