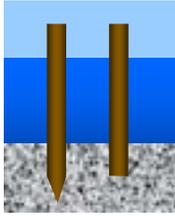


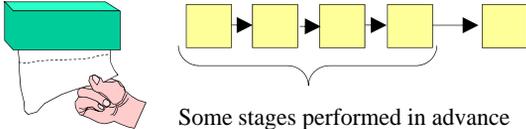
Separation in Time

Test for Separation in Time

I want the (element) to be (setting A) while (condition A). I want the (element) to be (setting B) while (condition B). Must the critical conditions overlap in time? If they must overlap then you should go to Separate Gradually.

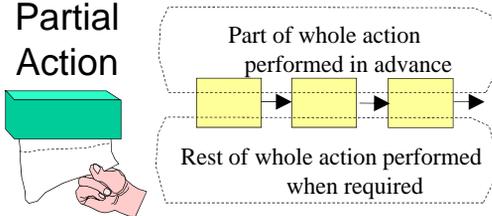


Prior Action



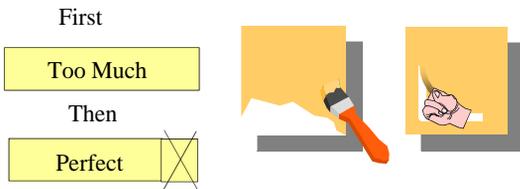
The contradiction attribute relates to an action or function. (Modification) of the (product) can be broken down into steps. The step(s) of (actions performed during Condition A) are performed during (condition A) by (method or previously placed tool) in order to have (setting A). The remaining step(s) of (remaining actions) are performed during (condition B) in order to have (setting B).

Partial Action



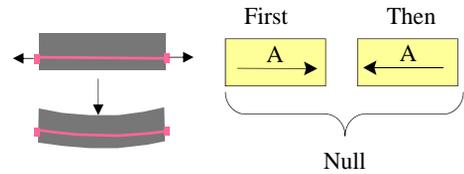
The contradiction attribute relates to an action or function. (Modification) of the (product of the function) is partially performed in its entirety during (condition A) by (method) giving (setting A). The function is completed during (condition B) by (description of final action) giving (setting B).

Excessive and Remedial Action



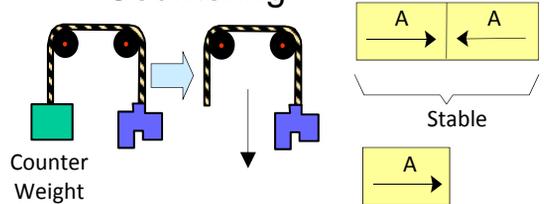
The contradiction attribute relates to an action or function that must be performed **rapidly** and **slowly**. The function of (modifying) the (product) can be rapidly performed by the gross action of (method of performing excessively). The detailed remedial action of (remedial action) is made possible by (method) in advance or by overflowing a (threshold) threshold by (method)

Prior Counter Action



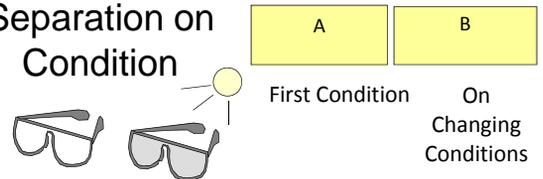
The harmful function of (harmful function) the (element) cannot be avoided. The counter action of (counter action) is performed in advance by (method of counter action) so that when the time for the harmful action of (harmful action) the (element) it is not (harmful action).

Counteracting



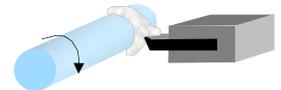
The contradiction attribute relates to an action or function. The (element) must be (null action) during (condition A). This is accomplished by applying (counteraction). The counter action is removed during (condition B) when the full action is required.

Separation on Condition



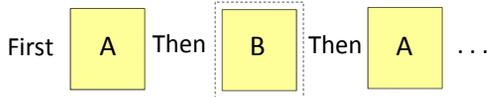
The difference of (difference) between (condition A) and (condition B) will change the (element attribute) from (setting A) to (setting B). The (physical phenomenon or method) will be exploited to drive the change of parameters.

Separation on Condition-Transparency



The difference of (difference) between (condition A) and (condition B) will change the (element) transparency from transparent to opaque. The (physical phenomenon or method) will be exploited to drive the change of parameters.

Transformation-Using Fields

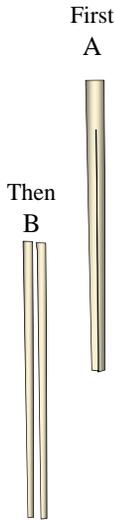


Using (physical phenomenon including pneumatic or hydraulic structures) allows us to add a (associated field from the table) to the (element) during (condition A), makes it (setting A). (Removing or reversing) the (field) during (condition B) makes it (setting B).



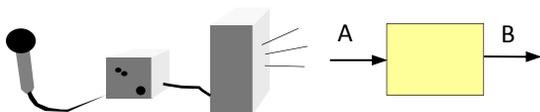
Transformation-Transformable States

Solid to Liquid to Gas
 Combustible materials
 Fissible
 Adhesives
 Explosive
 Wettable
 Exothermic-Endothermic
 Soluble or dissolvable materials
 Foams
 Settable liquids--(increase of volume)
 Easily breakable or abraidable
 Polymerizing or de-polymerizing
 Mixture decomposition --Electrolysis
 Disassociation- recombination
 Shape Memory Materials
 Magnetic materials using Curie Effect
 Molecular reorganization (diamonds)



The (element) is formed from (a transformable structure—consult the table). The (element) is (state A) during (condition A), thus making it (setting A). The (element) is (state B) during (condition B), thus making it (setting B). (The transformation) is operated near (critical point) by (method).

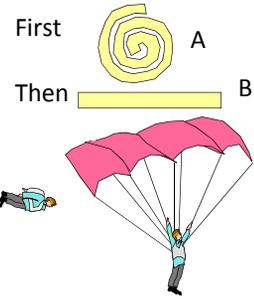
Transformation—Input / Output



The (elements) to be operated upon must be (setting A) during (condition A). A transformation of (phenomena or action) changes the (elements) to (setting B) during (condition B).

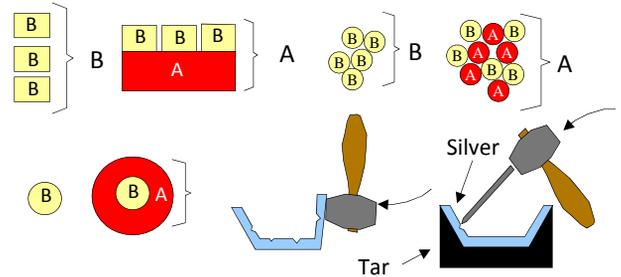
Transformation-Unrolling / Stretching

- Nesting Extenders
- Fabrics
- Extension Springs
- Constant Force Springs
- Shape Changing Molecules
- Nets
- Origami
- Scissoring Expanders



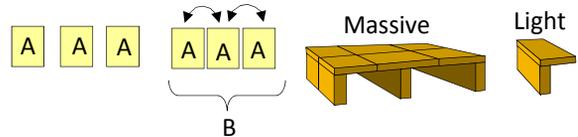
The (element) is formed from (expanding structure—see table). The (element) is (state A) during (condition A), thus making it (setting A). The (element) is (state B) during (condition B), thus making it (setting B).

Carrier / Intermediary



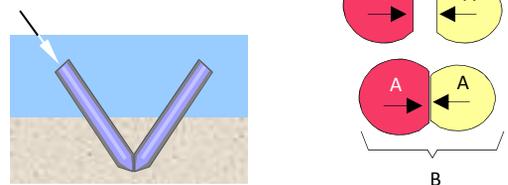
During (condition A) (an inexpensive carrier object or substance) which is (setting A) is (attached to, surrounding or mixed with) (segmented or individual) (elements) which are (setting B) thus loaning its property and making the combination (setting A). No carrier is used during (condition B) making the (element) (setting B).

Merging—Interacting



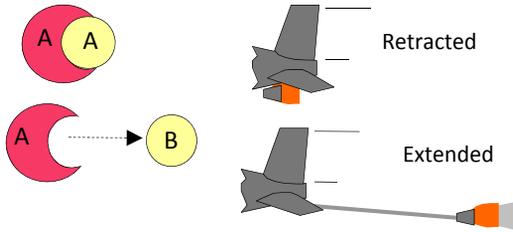
Segmentation is (allowed and accomplished by what method or not allowed). During (condition A) several (segmented or individual) (elements) have the property of being (setting A) while unified or interacting through (a field, mediator, method or unified arrangement). During (condition B) the unifying interaction is absent making them (setting B).

Merging—Countering



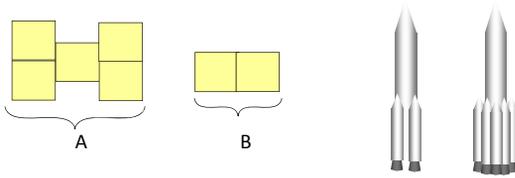
Elements are configured, oriented or designed to oppose each other by (method). Separating the (elements) during (condition A) makes them (setting A). During (condition B) the merged (elements) oppose each other making them (setting B).

Merging—Extraction



The (element) has several identifiable pieces. During (condition A) the (crucial piece) is separated making it (Setting A). During (condition B) the (crucial piece) is reunited making it (Setting B).

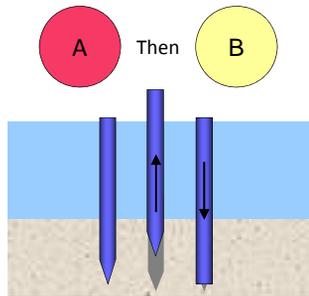
Merging—Adjustable Numbers



Multiple (elements) are available for adjustable use. During (condition A) many (elements) are used to give (Setting A). During (condition B) few elements are used to give (Setting B).

Rearranging—Two Objects

Two distinct (elements) are used. During (condition A) the (setting A) one is used. During (condition B) the (setting B) one is used.



Copy or Facsimile

Photographs Movies Paint Coverings Molds Time lapse photos Impressions	Silhouettes Castings Resists Projections Computer Model Dummies
---	--



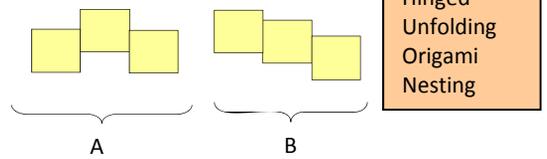
Mannequins (A)



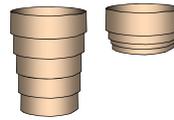
Real Victims (B)

The (essential part) of the (element) can be copied into a (copy name—consider the above list). During (condition A) the (copy name) is (Setting A). During (condition B) the (original) is (Setting B).

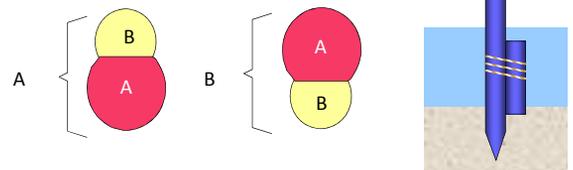
Rearranging—Reorienting Pieces



((Multiple or segmented elements) are coordinated together. During (condition A) the pieces are oriented so that they are collectively (Setting A). During (condition B) the pieces are oriented so that they are collectively (Setting B).

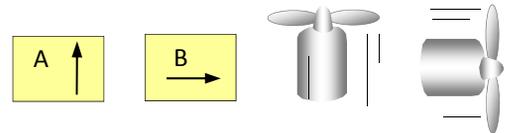


Rearranging—Reorienting Attachments



Two (objects) which are (Setting A) and (Setting B) are attached to each other. During (condition A) the pieces are oriented so that (Setting A) comes into play. During (condition B) the pieces are oriented so that (Setting B) comes into play.

Rearranging—Changing Directions



Changing directions of (crucial feature) allows the setting to be changed. During (condition A) the (crucial feature) is oriented so that (Setting A) comes into play. During (condition B) the (crucial feature) changes direction so that (Setting B) comes into play.

Rearranging - Reorienting Non-Uniform



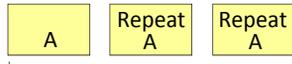
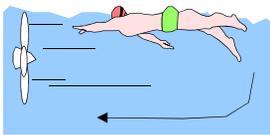
Part of a single (element) is (Setting A) while another part is (Setting B). During (condition A) the non-uniform (element) is oriented so that (Setting A) is emphasized. During (condition B) the (element) is reoriented so that (Setting B) is emphasized.

Separate Gradually

Test for Separate Gradually

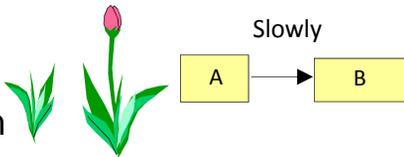
Will a complete resolution of the contradiction allow starting with (setting A) and ending with (setting B) or its equivalent? If "yes" then try to Separate Gradually. Otherwise, go to Separate in Space.

Repeated Use



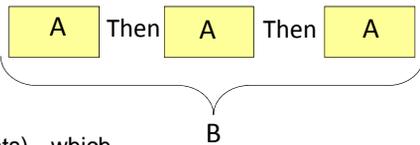
((Setting A) (element) is used over and over which is equivalent to (setting B) (element). (Method of reconditioning) is used to make this happen.

Maturing / Proliferation



The (element) is capable of self organization through (method). During (condition A) the (element) starts as (setting A). Over time the (element) matures or proliferates to become (setting B) during (condition B).

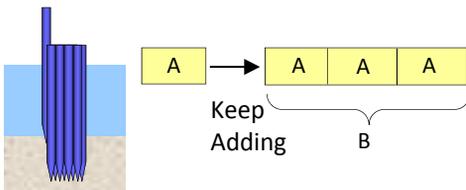
Separate Use



Individual (elements) which are (setting A) come into play gradually during (condition A). In the end, the sum effect is (setting B).



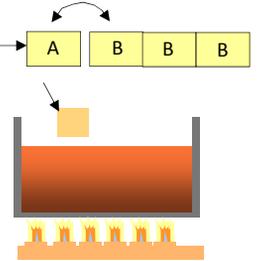
Gradually Merged



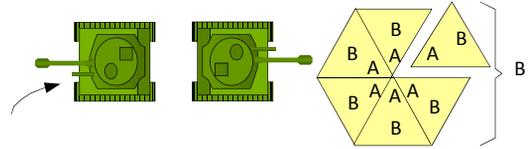
Multiple or segmented (elements) are available. Gradually merging the (setting A) (elements) during (condition A) results in the equivalent of (setting B) (elements).

Merging—Interaction

Multiple or segmented (elements) are available. Each (setting A) (element) that is merged during (condition A) with the already merged (elements) become (setting B) by (method).

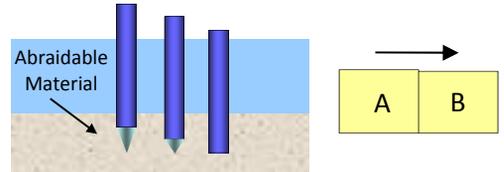


Gradually Hidden / Exposed



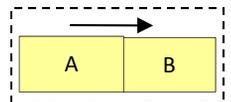
The (element) already has both properties. (Setting A) is desirable and (setting B) is undesirable. The (elements) are gradually merged in a way that hides (setting B) until the whole is (setting A).

Gradually Transformed



The (element) (critical region) is made from (transformable material). During (condition A) the (element) transforms from (setting A) to (setting B).

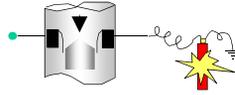
Gradually Added Fields



The (element) (critical region) can be changed from (setting A) to (setting B) by gradually adding a (field type) field. During (condition A) the (element) transforms from (setting A) to (setting B).

Separate in Space

Test for Separation in Space

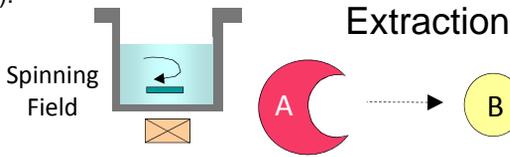


During (critical time) (setting A) is essential (where condition A exists). (Setting B) is essential (where condition B exists). Must these conditions (and settings) overlap in space? If yes then go to Separate between the Parts and the Whole.

Two Objects



If more than one type of (element) is allowed, one (element) is (setting A) and a nearby (element) is (setting B).

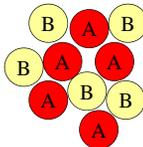


Extraction

If the (element) can be separated into functional parts: The separated (element part) is (setting A). The (rest of the element parts) are (setting B). The separated parts interact through (means).

Mixture

(Inexpensive particles or segmented elements) which are (setting A) are mixed with (particles or segmented elements) which are (setting B).



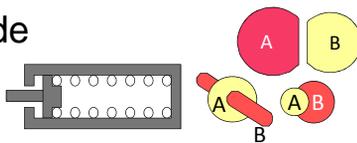
Path



On a path (path location A) the (element knob) is (setting A). On a path (path location B) the (element knob) is (setting B).

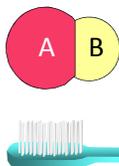
Interact / Guide

/ Nestle / Penetrate



The (element) is (setting A). The interacting (object) is (setting B). The objects (interact / guide / nestle or go through each other).

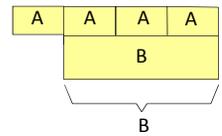
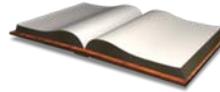
Attached Objects



The (element or element part) is (setting A). The attached (object) is (setting B).

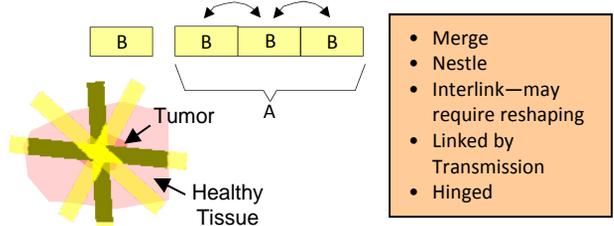
- Inert carriers
- Dual states—same material
- Dual phase substances
- Thin Films
- Paint
- Nested parts
- Attached parts
- Mixed somewhat

Partly Carried



Several (elements) can be used. Some of the (elements) which are (setting A) are attached to a (carrier) which is (setting B). The (carrier) and attached (elements) are collectively (setting B). The (elements or element parts) which are not carried are still (setting A).

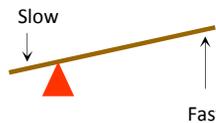
Partly Merged or Interacting



- Merge
- Nestle
- Interlink—may require reshaping
- Linked by Transmission
- Hinged

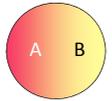
Several (elements) can be used. They partially merge or interact by (method of merging or interaction). The partly merged (elements or part of the elements) are (setting A). All that are unmerged are (setting B).

Non-Uniform

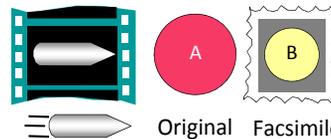


- Transformers (electric, levers, etc.)
- Standing Waves
- Concentrated Additives
- Especially active Additives

Only one (element) is allowed. One part of the (element) is (setting A). Another part of the same (element) is (setting B).



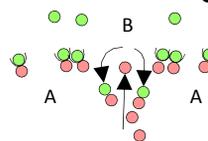
Facsimile



- Photographs
- Movies
- Paint Coverings
- Molds
- Time lapse photos
- Impressions
- Silhouettes
- Castings
- Resists
- Projections
- Computer Models

The (element) is unfortunately (setting A). But we can change its (appearance, sound, feel, smell or effect) to seem like it is (setting B) when using (a type of facsimile that represents the important attributes).

Selective Countering



For actions, forces or extrinsic attributes that depend upon interactions such as beauty. Part of the (element) has (countering forces, fields or actions) in one location. In another location of the (element) the counter (counter forces, fields or actions) do not exist..

On Condition

One (element) is (location creating condition A) rendering it (setting A). Another (element) is (location creating condition B) rendering it (setting B)



Separate between the Parts and the Whole

Test for Separation Between the Parts and the Whole

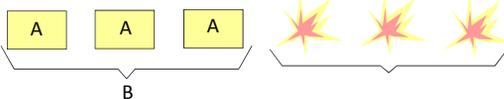


Step 1: At a critical moment in time, should either (setting A) or (setting B) be hidden or minimized to solve the problem?

Step 2: At a critical moment in time, do I want (setting A) and (setting B) to be expressed at different scales?

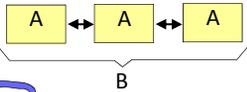
Step 3: If the answer to 1 and 2 is "no", go to separation by direction. Otherwise, separate between the parts and the whole.

Formation



(Segmented or individual) (elements) are (setting A). The (elements) are arranged into a formation which (describe working formation). This formation has the macro effect of being (setting B). (Setting A) is (expressed or hidden).

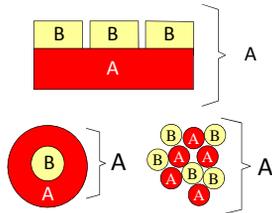
Merging



(Segmented or individual) (elements) have the property of being (setting A). When made to interact with each other by (field, mediator, method or arrangement), the overall effect is (setting B). (Setting A) is (expressed or hidden).

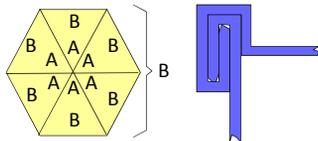
- Interact—Field
- Interact --mediator
- Transmission
- Touch
- Interweave
- Nest
- Nestle
- Interlink
- Clamped
- Hinged
- Interfused
- Fractals

Carrier



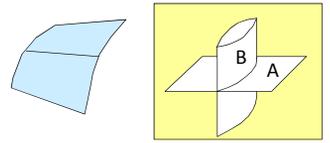
(An inexpensive carrier object or substance) which is (setting A) is (attached to, surrounding or mixed with) (segmented or individual) (elements) which are (setting B) thus loaning its property and making the combination (setting A) at the macro scale. (Setting B) is (hidden or expressed at the micro scale).

Hiding Part



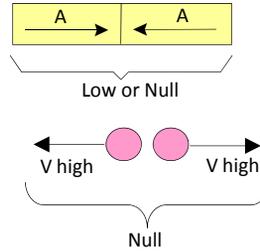
Each individual (elements) already has the undesirable property of (setting A) and the desirable property of (setting B), even in the slightest degree. The (elements) are merged (into a configuration that hides setting A—try different orientations) thus giving the general property of (setting B).

New Dimension



The (element) has the property of being (setting A). Going (up or down) in dimension gives the (element) the property of being (setting B) since (explanation).

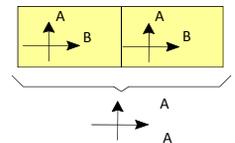
Countering



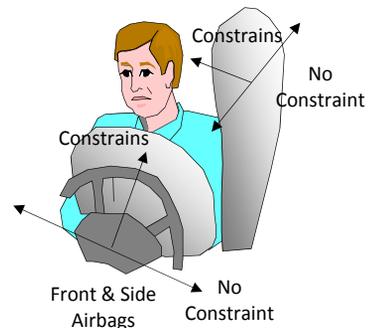
- Opposing Element
- Counter Weight with Transmission means
- Negative Spring Rate
- Negative rate of change of lever arm
- Counter Field Gradient

The (element) (force, field, field gradient or action) has a direction with the undesirable property of (setting A). Countering the (force, field, field gradient or action) with (a counter measure) gives the desirable (setting B--Low or Null).

Complimentary Directions

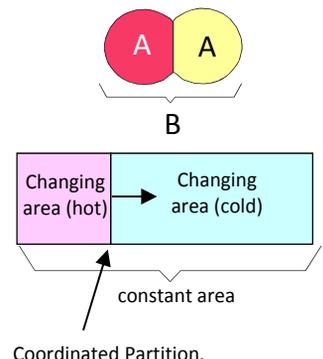


Each (element) is (setting A) which is desirable in one direction and (setting B) which is undesirable in another direction. Combining two or more (elements) and orienting them in a complimentary fashion makes the combination (setting A) in both directions.



Coordinated Parts

Adjustable (elements) have the property of being (setting A). When coordinated with each other by (method), the overall effect is (setting B). (Setting A) is (expressed or hidden).

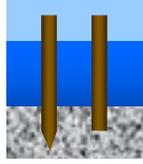


Coordinated Partition.

Separate by Direction

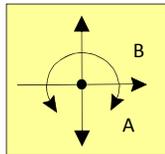
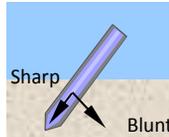
Test for Separation by Direction

Does one of the conflicting properties already exist in a different direction or can it be modified to be so? If "no" then continue to separate by perspective. Otherwise try to separate by direction.

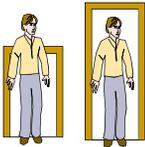


Separate by Direction

The (element) is (setting A) (in direction A). The (element) (is already or can become) (setting B) (in the opposite direction or at right angles or in the rotary direction) if (new conditions—give explanation if required).



Separate by Frame of Reference

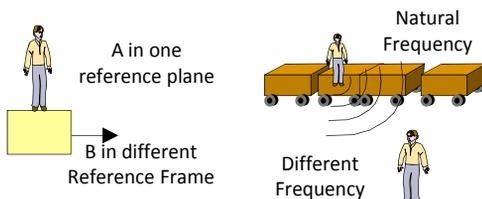


By Comparison

A: Compared to Property Element 2
B: Compared to changed property

The (element) is already (setting A) when compared to (property of element 2). Changing (element 2) by (method of changing the property of element 2) makes the (element) (setting B).

Inertial or Spatial Frame of Reference



The (element) is already (setting A) when compared to (inertial, rotational, spatial or coordinate system frame of reference). Changing the frame of reference by (method) makes the (element) (setting B).

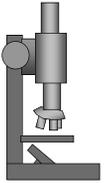
Separate by Perspective

Test for Separation by Perspective

Is it sufficient too only appear to have one of the knob settings? If yes then separate by perspective

How You Look or Perceive

Actually: A
Looks: B
(In microscope)



The (element) is naturally and unfortunately (setting A). It (looks like, sounds like, feels like or smells like) it is (setting B) when (a method of measurement or detection is used).

Looks Like

Actually: A
Looks Like: B



The (element) is unfortunately (setting A). But we can change its (appearance, sound, feel or smell) to seem like (setting B) when using (paint, a substitute or covering fake object, camouflage, substitute smells, substitute taste, substitute sound).

Inference

Actually: A
Inferred to be: B



The (element) is unfortunately (setting A). But we can change its (appearance, sound, feel or smell or effect) to seem like it is (setting B) by (a method to infer that it is setting B).

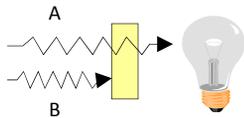
Separate by Response of Fields

Test for Separation by Response of Fields

It is essential that the field response to the (substance in the operating region) must be (**setting A**) for (field region A or field A)

The field response to the (substance in the operating region) must be (**setting B**) for (field region B or field B)
Is it essential that field region or field A and B be the same? If they must be the same, then jump to Separation between Substance and Field.

Separate by Response of Fields



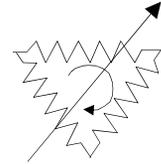
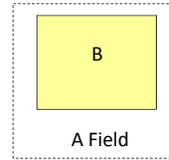
- Optically transparent materials
- Resonant structures
- Field shape changing materials
- Field gradient changing materials
- Reflective or channeling structures
- Filters
- Frequency or color changing
- Speed changing
- Phase changing
- Polarization changing
- Field Type changing
- Field absorption changing materials

The response of (field region A or field A) to (material, coating or structure) is (**setting A**). The response of (field region B or field B) to (material, coating or structure) is (**setting B**).

For Example:

The response of (visible light) to (glass) is (**conducting**). The response of (ultraviolet light) to (glass) is (**non-conducting**).

Separate Between The Substance and the Field



The field element associated with the conflict is (a field element). The substance element associated with the conflict is (a substance element). The (field element) is (setting A) and the (substance element) is (setting B). This is accomplished by (architecture).

Compensate

Turn a knob sufficiently to fix the given problem without regard for what gets worse. Identify another knob which can be turned which compensates for the first one turned.