U-SIT And Think News Letter - 74

Unified **S**tructured **I**nventive **T**hinking is a problem-solving methodology for creating unconventional perspectives of a problem, and discovering innovative solution concepts, when conventional methodology has waned. **H**euristic **I**nnovation is an extension of **USIT**.

Subject Keys

PD = Problem definition
H = **Heuristics**
T = Theory
M = Metaphors
A = Analysis
BH = **Brain hemispheres**

Dear Readers:

. This is the last lecture in the series "Two Brains Are Better". In subsequent lectures I'll address specific heuristics and problem-solving issues.

. The last mini-lecture dealt with intuitive images generated without the bias of verbal characterizations. Some results are discussed here.

Mini USIT Lecture – 74

Two Brains Are Better – V

Recap: Mini-lecture IV ended with this, somewhat nostalgic, sentence:

> *"The object of this exercise is not to find overwhelming invention, but recognition that without words to trigger logical thinking, simple shapes can inspire intuitive thinking."*

For me the nostalgia came as recollection of a most creative childhood pastime; that of playing with toy blocks, having no verbal characterizations, from which one could create anything including whole new worlds. I wonder: could this be our first laboratory experiments in creative problem solving?

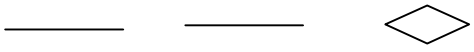
The last mini-lecture began with three exercises. Construct something from these three groups of shapes:

1) 

****

2) 

****

3) 

Results from Mini USIT Lecture IV

Here are some examples from readers. As you will see, in these results, minimal information can spark wonderfully creative thinking.

1. Michel Lecoq wrote (see figures on previous page) …
For 1)

I see a motorcycle climbing the left side of the triangle then gaining speed by descending the right side of the triangle and then with full gas climbing the oblique line to jump over the rectangle

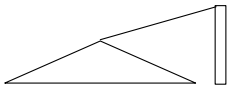
For 2)

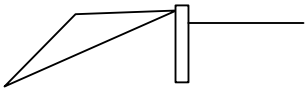
I have to squeeze the circle into an oval to put it thru the square

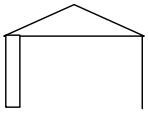
For 3)

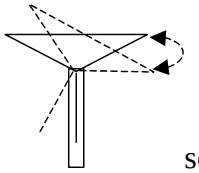
the letter G in the Morse alphabet - - . (bar, bar, dot)

2. Mark Smith sent the following (I reworked his freehand sketches) …
For 1)


bicycle ramp

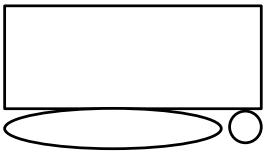

rabbit trap


picnic pavilion

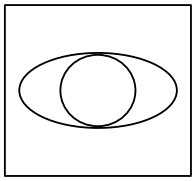

scale

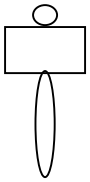
For 2)

wheeled/tracked vehicle



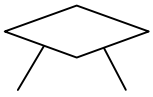
camera lens inside a box



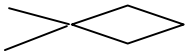


lighted sign (lots of construction work on my way to work these days)

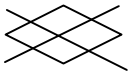
For 3)


lunar lander

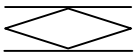
fishing lure



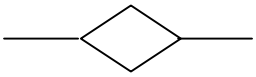
ink stamp to create argyle pattern



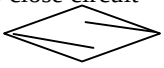
flywheel (point contact to top and bottom constraining surfaces reduces friction)



two-handed tennis racquet



some sort of electrical contact switch – contacts deflect under acceleration or temperature change to close circuit



Comments

I find these to be fascinating examples of creative thinking. They were done with the same time constraints used by Finke, et al (see Mini-Lecture IV), but without the constraints of object and attribute names.

What appears to happen when faced with this kind of challenge is that one makes assumptions, albeit, often subconscious assumptions. Such subconscious assumptions, having no conscious verbiage, are likely the product of our intuitive hemispheres. They occur and are used as trial-and-error tests to see what they may produce. They are thought-provoking seeds.

One reader agreed with me that three minutes was not enough time to consciously consider using USIT heuristics in these three exercises. This may be one's unconscious deference to intuitive thinking – we want to brainstorm ideas quickly before losing them. We know that we can then proceed in a logical manner to exercise learned methodologies for generating ideas. This supports my practice when teaching to have students do a "mental dump" of all known and suddenly realized solution concepts before exercising any structured methodology.

But why do we loose ideas if they are not recorded as quickly as they come to mind? I suspect this is another clue, or bit of evidence, that intuitive, non-language thinking is at work. Our intuitive ideas initially are more image than they are verbal description. Creating verbal description, hearing it, seeing it, and writing it produces multiple tags for later recall. Until that is done, intuitive ideas are too easily misplaced in our minds.

Conclusion of Two Heads Are Better

The richness of thinking resources we bring to bear on a problem is evinced in verbal heuristics for the logical hemisphere and graphic images for the intuitive hemisphere. The effectiveness of our use of these resources is evinced in the creativeness of ideas generated. As we inculcate two-brain thinking into our natural mode of problem solving we begin to reap intellectual pleasure in our capabilities.

To be creative, we sit and think.

(When I retired from Ford Motor Company the SIT Team presented to me this copy of François-Auguste-René Rodin's "Le Penseur", "The Thinker". It sits on my desk stirring my imagination.)

Other Interests

1. Have a look at the USIT textbook, "Unified Structured Inventive Thinking – How to Invent", details may be found at the Ntelleck website: www.u-sit.net
2. See also "Heuristic Innovation", and register for multiple resources.

Publications	Language	Translators	Available at …
1. Textbook: Unified Structured Inventive Thinking – How to Invent	English	Ed Sickafus (author)	www.u-sit.net
2. eBook: Unified Structured Inventive Thinking – an Overview	English	Ed Sickafus (author)	www.u-sit.net
	Japanese	Keishi Kawamo, Shigeomi Koshimizu and Toru Nakagawa	www.osaka-gu.ac.jp/php/nakagawa/TRIZ/
	Korean	Yong-Taek Park	www.ktriza.com/www/usit/register_form.htm
"Pensamiento Inventivo Estructurado Unificado – Una Apreciación Global"	Spanish	Juan Carlos Nishiyama y Carlos Eduardo Requena	www.u-sit.net
3. eBook "Heuristics for Solving Technical Problems – Theory, Derivation, Application" -- HSTP	English	Ed Sickafus (author)	www.u-sit.net
"Heurísticas para Resolver Problemas técnicos – Teoría Deducción Aplicación"	Spanish	Juan Carlos Nishiyama y Carlos Eduardo Requena	www.u-sit.net
4. U-SIT and Think Newsletter	English	Ed Sickafus (Editor)	www.u-sit.net
	Japanese	Toru Nakagawa and Hideaki Kosha	www.osaka-gu.ac.jp/php/nakagawa/TRIZ/
	Korean	Yong-Taek Park	www.ktriza.com.
Mini-lectures from NL_01 through NL_67	Spanish	Juan Carlos Nishiyama y Carlos Eduardo Requena	www.u-sit.net click on Registration

Please send your feedback and suggestions to Ntelleck@u-sit.net and visit www.u-sit.net

To be creative, U-SIT and think.

