

From: [Gavan Lintern](mailto:glintern@cognitivesystemsdesign.net)
To: glintern@cognitivesystemsdesign.net
Subject: Cognitive Systems Design (new exercise & other news)
Date: Thursday, 25 April 2013 6:11:55 PM



Cognitive Systems Design

Update March 2013

[View this email online if you can't see the images](#)

Exercise:

What is wrong with this abstraction-decomposition space?

An abstraction-decomposition space has a structure that is defined by the principles of abstraction, decomposition and means-ends relations. The concepts entered at each level must be objects, functions or purposes (not processes) and appropriate to their designated level. The connections between levels must represent means-ends relations where the concept at a lower level enables the concept at the next level up. Every concept must be part of an unbroken chain through the five levels from physical objects to domain purpose. Common errors are to decompose over the abstraction hierarchy and to link work functions to values that those work functions clearly do not support.

[Download the Exercise Now](#)

Joker One: A Tutorial in Cognitive Work Analysis

In this book-length tutorial, I take narratives from a work system in action and show how they can be represented within the framework of cognitive work analysis. What I do here is most specifically aimed at familiarising you with the mechanics of the framework. I proceed systematically through the framework of cognitive work analysis to demonstrate how to develop each of the representational products and how to use them for design. My tutorial illustrations draw on US Marine combat narratives from Donovan Campbell's book, Joker One, which offers an account of his experiences in Ramadi, Iraq where his platoon battled insurgents for seven months in 2004.

I will make this tutorial available in April but at this time am looking for reviewers. If you would care to serve as a reviewer, please contact me at glintern@cognitivesystemsdesign.net

Cognitive Principles, Cognitive Power

Over and over, I see evidence that judicious application of cognitive design principles and cognitive training principles can have enormous impact on our performance.

In 1854, Dr John Snow used a simple cognitive principle to investigate a cholera epidemic. He visually mapped locations of pumps that supplied London residents with drinking water against locations of cholera deaths. [Read More](#)

And then there is chicken sexing and landmine detection. What cognitive principles could they possibly illustrate? [Read More](#)
Is team performance important for you? How might you dramatically improve the performance of an overworked team without the additional expense of more staff or new technology. [Read More](#)

I could go on. Each case requires specific knowledge of the particulars but the cognitive principles are generalizable.

It is not that cognitive principles are particularly new or complicated or otherwise obscure. Many were employed to good effect during the Second World War. Somehow, we have drifted away from appreciating the power of cognition.

I am excited about how we can identify the cognitive performance barriers we encounter and how we can develop effective, efficient and economical design interventions or training experiences to overcome them. I find it enormously rewarding to bring those ideas to others.

If you are intrigued by the potential to achieve transformational change through leveraging your cognitive power or the cognitive power of your organization, contact me to discuss a workshop.

Organizational Mindfulness:

Safety Culture and Change Management

Why do many organizations have a dysfunctional safety culture? Why do some have a healthy culture? How might we transform a dysfunctional culture into a healthy one? There is considerable interest these days in organizational culture and safety culture. Some, possibly many, organizations are thought to exhibit a dysfunctional culture that results in unsafe work practices. This is seen as a pervasive problem in many areas, for example oil production, chemical manufacturing, health care and land and sea transportation. In contrast, aviation is viewed (with some notable exceptions) as having a resilient organizational culture.

In this brief on organizational culture, I contrast dysfunctional and healthy cultures and discuss how a dysfunctional culture can be transformed into a healthy one. [Download the brief now.](#)

If you no longer wish to receive these emails, please reply to this message with "Unsubscribe" in the subject line.

If you have received this email from a colleague and wish to subscribe to updates, go to the website shown below.

Cognitive Systems Design | www.CognitiveSystemsDesign.net