



**Excellence in Developing Global Management Teams**

## **Department of Electrical Engineering**



**IRWIN AND JOAN JACOBS  
CENTER FOR COMMUNICATION AND  
INFORMATION TECHNOLOGIES (CCIT)**

# **Da Vinci, Edison, Einstein: Why & How Great Innovators Merge East and West**

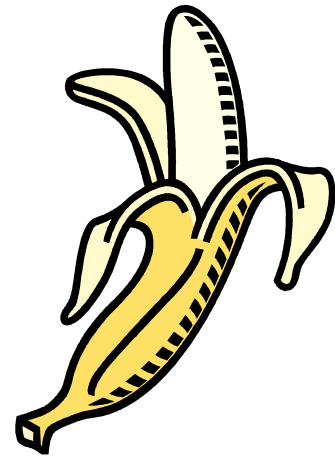
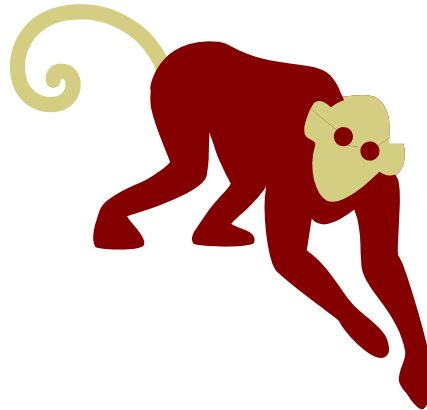
**Prof. Shlomo Maital, Academic  
Director, TIM – Tel Aviv**

**"Human cognition is not everywhere the same," concludes psychologist Richard E. Nisbett of the University of Michigan, Ann Arbor, in his new book,**

***The Geography of Thought:  
How Asians and Westerners Think Differently  
... and Why.***

**Instead, he says, "the characteristic thought processes of Asians and Westerners differ greatly."**

**Which two -- of a panda, a monkey and a banana -- go together?**



**East Versus West: One Sees Big Picture, Other Is Focused**

- **Westerners typically see categories (animals) where Asians typically see relationships (monkeys eat bananas).**

- **Westerners pay attention to the focal object, while Asians attend more broadly -- to the overall surroundings and to the relations between the object and the field.**

**• To the Asians, changing circumstances dictated changes in agreements; to the Westerners, a deal was a deal.**

**• Westerners prefer abstract universal principles; Asians seek rules appropriate to a situation.**

**Nisbett: “Bicultural people show thinking patterns intermediate between East and West.**

**That's a model that workplaces might do well to emulate. The more cultural diversity and, hence, thinking styles in a workforce, the *likelier it is to see problems clearly and solve them.*”**



**Leonardo da Vinci,  
April 15, 1452 - May 2, 1519.**



**scientist**

**engineer**

**“sun does not move”**

**“gravity”**

**Darwin - evolution**

**anatomical science**

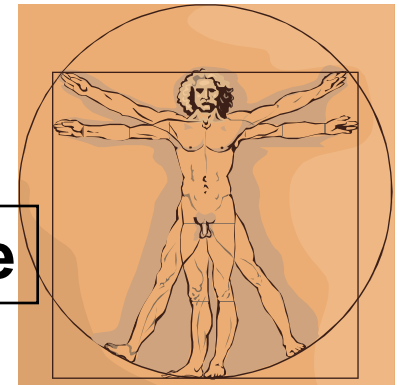
**helicopter**

**parachute**

**artist**

**Mona Lisa**

**The Last Supper**







Used da Vinci's parachute: Olivier Vietta-Teppa



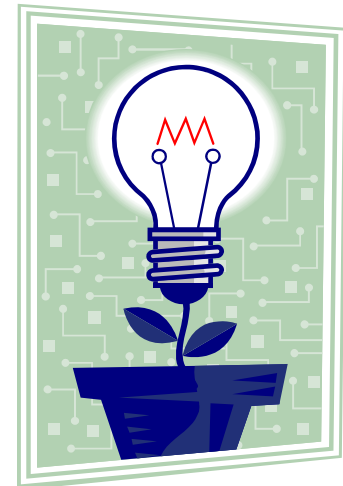
## Thomas Edison

born: February 11, 1847.

died: October 18, 1931.



# Business Innovation: Edison's System Thinking



## The 7 Critical Systems Elements

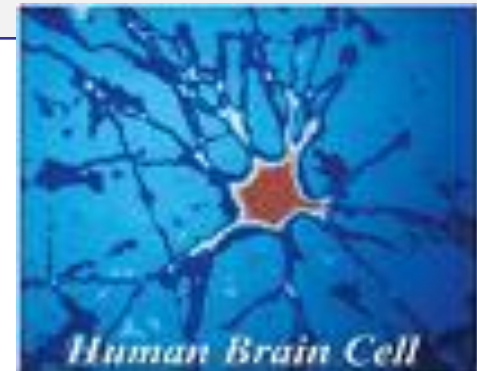
- 1 The parallel circuit,**
- 2 A durable light bulb,**
- 3 An improved dynamo,**
- 4 The underground conductor network,**
- 5 The devices for maintaining constant voltage,**
- 6 Safety fuses and insulating materials, and**
- 7 Light sockets with on-off switches.**

**Birth : March 14, 1879. Death: April 18, 1955**



**Einstein's Miracle Year (1905): at age 26**

- \* submits dissertation for publication
- \* photoelectric effect (light as a particle) (Brownian motion)
- \* special theory of relativity
- \*  $E = mc^2$



## How to be an Einstein business innovator:



1. Get low grades in school \*

\* Einstein's high school average was 4.91/6 (below average)

2. Have someone say: "nothing will ever come of you!" \*

\* Joseph Degenhart, Einstein's high school teacher

3. Always look for grand "big picture" linkages;  
"connect the unconnected" \*

\* energy; mass; speed of light  $E = mc^2$

**Innovative thinking =**

**West (focus)**

**+ East (context)**

