



Better Problem-Solving and Decision-Making

Linda Rising

linda@lindarising.org

www.lindarising.org

[@RisingLinda](#)

What is thinking?



Thinking or decision-making here?





Are there similarities in these two settings?

Sitting

Long periods of focused attention without a break

Inside – no connection with Nature, no natural light

Drab, probably noisy surroundings

Tired, over-caffeinated individuals



My goal: useful tips

Cognitive science is fast growing, uses controlled experiments, on-going re-testing, explosion in results

Our field is slow growing, few, if any controlled experiments (mostly anecdotes, case studies)

We should pay attention – it might help us do our work better 😊!



Move!

**Blink, look at the horizon, turn your head,
move your eyes from side to side, look
around, look outside**

**Stand up, stretch – companies
experimenting with stand-ups**

Lie down

Exercise – even 5 minutes

Sitting kills ☹️!

Treadmill Desk





Walking improves memory

Researchers asked some subjects to study a famous painting by walking back and forth in front of it. Results showed that these walkers remembered more about the painting than other subjects who sat still in front of it and “paid attention” to it.

James Zull, The Art of Changing the Brain

Salo walking meeting – financial services company in Minneapolis





Take a Break


Bio break, coffee break (caffeine is the subject of another talk), smokers' edge ☺!

Walk – effective persuasion technique – walk sideways or backward

Take a nap (subject of another talk)

Work on a different hard problem - multi-tasking is ineffective (can you listen to two songs at the same time?)

Work on a different easy problem – quickly



When Arianna Huffington is looking for inspiration, she goes to sleep. "There are many, many great ideas locked inside of us," she says. "We just need to close our eyes to see them."

There are three nap rooms in the offices of the Huffington Post Media Group.




Do “Nothing”

When people constantly bombard their brains with digital input, they are forfeiting downtime that could allow them to better learn and remember information, or come up with new ideas.

Processing a barrage of information leaves people too fatigued to learn.

The brain needs downtime.

We think we’re relaxing by distracting ourselves, but we’re fatiguing our brains.



“My commute is my most productive creative time when I’m not focusing on anything.”

Chris Cox, Facebook’s Product Chief



Drink, Eat

**Even mild dehydration affects the brain –
always have water on hand – watch the
caffeine**

**Decision-making requires energy, if tired
and hungry people are forced to make
decisions, they look for the easy way out**

**Study of judges granting more favorable
verdict after breaks**



Nature Nurtures

Plants (must be the real thing, not photos or displays) improve innovative and creative thinking

Looking outside improves health

Walking outside, even for a few minutes, improves decision-making (better than walking in urban areas)



Cardboard consultant

Explain the problem out loud to something or someone else – a stuffed animal, a photo, or another person who does not have to understand what you are talking about 😊!

Use this technique in meetings – have proposers of different solutions explain their version of the problem (not the solution!) to others



Write, Draw, Sketch

Typing is the least effective means for description

Writing by hand is useful for solving problems of all kinds

Drawing, sketching are also helpful – research shows that doodlers remember more information than note-takers – encourage doodling at meetings!



Happy people are more productive

**Posture – sit up, both feet on the floor,
arms open, pull work toward you, nod
your head**

**Smile – research shows this to be as
effective as anti-depressants 😊! Fake it!**

**Language – choose affirming words “like,”
“positive,” find areas of agreement, “yes,
and”**



Be mindful of the environment

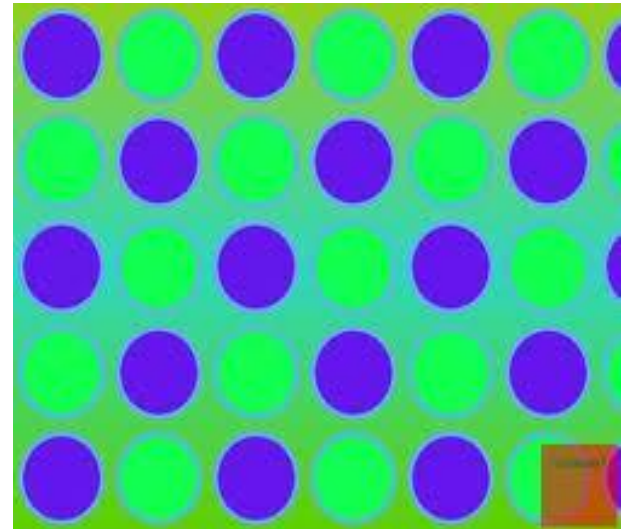
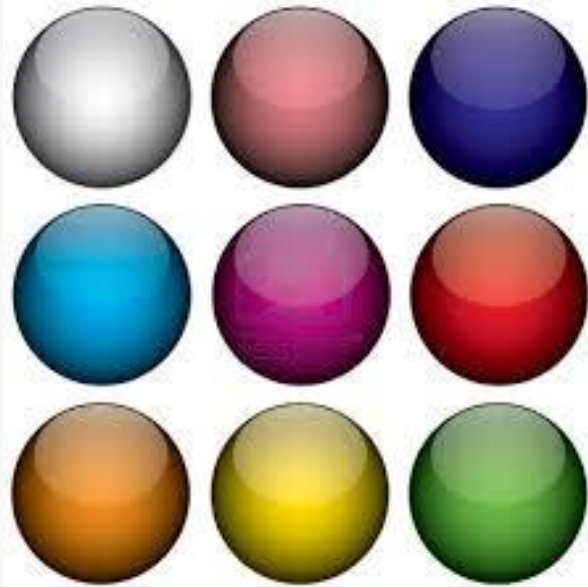
New research suggests that we are sensitive to our environment – sitting in a hard vs. soft chair or the weight of a document influences how “hard” or “weighty” we believe an issue to be

Temperature of the room or drinks influences how we feel about others around us.

Higher ceilings increases innovation. Lower ceiling concentrates on details.

Noisy environments are harmful.

Art spurs innovation





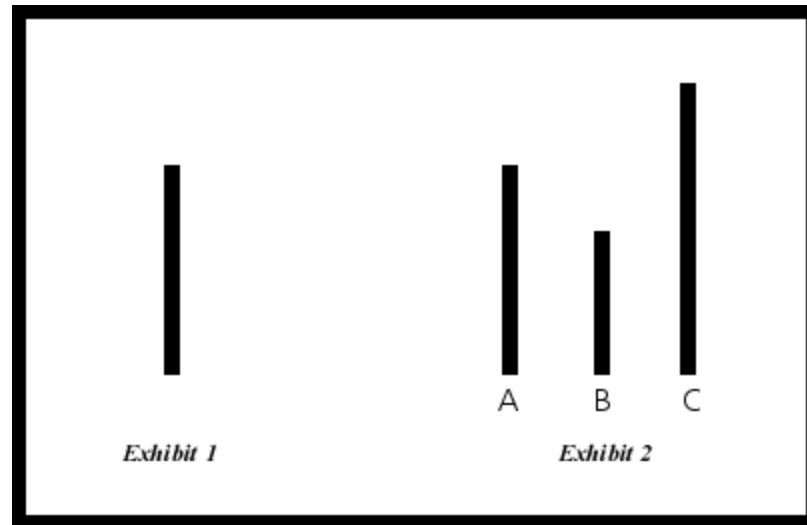
Brainstorming

Brainstorming “invented” in the 1940s – is intuitively appealing – we all get together and follow some simple rules to generate innovative ideas

Research shows that individuals working on their own produce a higher quantity/quality of ideas than those in groups and avoids “social loafing” and “groupthink”

Stressed people tend to conform more to social opinion.

Solomon Asch Experiment





More effective than brainstorming

Quiet storming after preparation

**Independence is a requirement for
individual action**



Diversity!

Have more women on the team or involved somehow.

Preliminary research shows higher quality collaboration, changes the behavior of the male members, increases group intelligence and overall performance.

<http://hbr.org/2011/06/defend-your-research-what-makes-a-team-smarter-more-women/>



Small Steps

We have a sense that large, complex problems require large, complex solutions.

Organizations and software are examples of complex systems where the impact of any change is difficult to predict

The often-overlooked approach of Small Steps (it's a pattern!) is a better road to success where the result of each small experiment can be seen before the next step is taken.

Implementation intention



Cutting edge suggestions

Singing reduces stress and lowers blood pressure

Avoid buyer's remorse - hand washing - bring a sense of closure to the decision, don't continue to debate

Animals!



Research shows dogs in the workplace result in better collaboration within teams.

Babies at Menlo

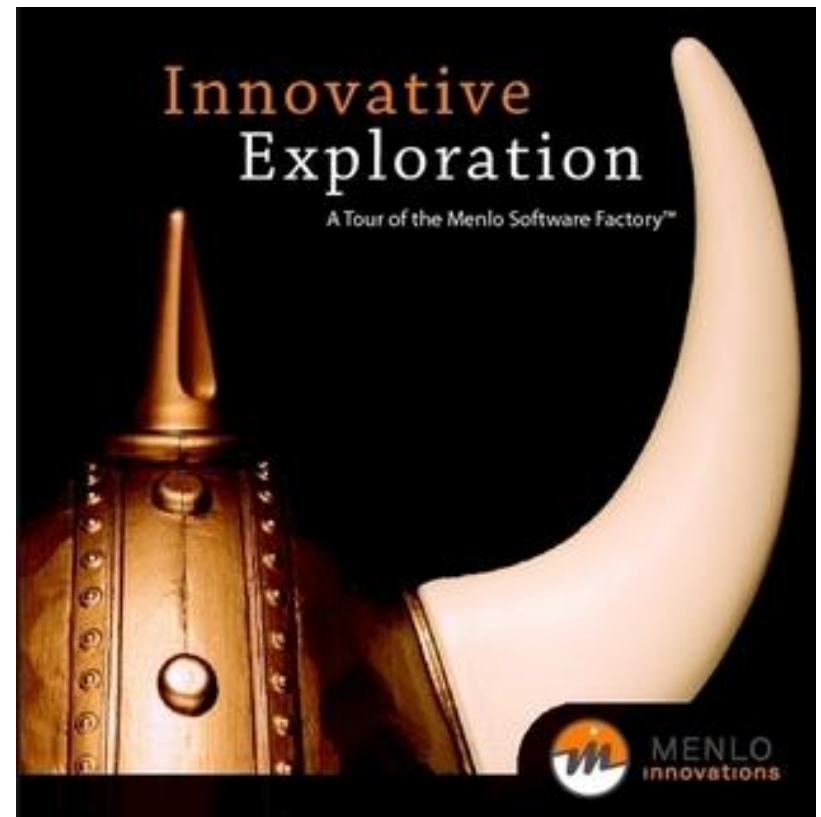


Menlo Innovations

menloinnovations.com/

Software design and development should be a joyful experience.

To achieve this joy, we have changed everything.





Thinking Tips Summary

- **Move**
- **Take a break**
- **Sleep, naps**
- **Eat/drink (careful of caffeine)**
- **Nature**
- **Environment (animals, babies, plants)**



Try your own experiments

Use these patterns from *Fearless Change*:

- Test the waters
- Time for Reflection
- Small Success
- Step by Step

Thanks for listening!