The Science of Time Management

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Time Management

• Using your time wisely
• Prioritization
• Analysis of how you spend your time
• Limiting wasted time
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Be clear about control

Time management is vague
- You can’t control time

Can have some control over
- Perceptions of time
- Training your mind to be efficient
- The environment that allows you to be effective
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• What % of people can do two or more things at once (effectively)?
• Can you become better at multi-tasking with practice?
• How often do people need breaks during heavy concentration?
• How many words can you hold in your “working” memory for more than 20 seconds?
• How much time does the average person spend daydreaming?
• Does pay improve performance?
• Working Memory
• Attention
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• Working Memory
  Conscious thoughts
  Can’t turn it off
  What we use to attend to current issues
• Working Memory
  Stores immediate experience
  Accesses long term memory
  Combines them to process meaning
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- Working Memory
  Limited in:
  Capacity
  Duration
  Focus (attention)

Remember a 10 digit number
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• Chunking

413-538-2796
Multi-Tasking is a Myth

- Our brains don’t consciously do two complex tasks at once
- Instead, we rapidly switch between tasks
- Creates an interference crisis in our mind
- Loss of cognitive control
- Instead of training our brain to be more effective, it trains us to be easily distracted
Multi-Tasking is a Myth

Research found Heavy Multi-Taskers:
- Have poorer memory
- More difficulty switching tasks
- Fail to filter irrelevant information

Mental interference and brain plasticity
- Become hard wired to lose attention
- Stimuli does not just flood our brains, we can selectively let it in by regulating attention

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Multi-Tasking

• In studies using a driving simulator while doing cognitive tasks-about 2.5% of people have exceptional abilities-Super-taskers
• What is different?
  • Emotional control-less anxious (genetic basis)
  • Exceptional ability to tune out distractions
  • Very good at spatial attention
  • Strict focus on subject makes it easier to tune out irrelevant stimuli
  • Cognitive control-allow less into your mind instead of more
• Gaming research shows that we can train ourselves to focus by learning one task and slowly adding very small amounts of other stimuli

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Attention

- Limited capacity
- Limited duration
- Limited focus (attention)

Change blindness (exercises)
Reasons for Change blindness

Overwriting—Current image is overwritten by new image and detailed information is lost

First Impression—Only initial view is abstracted—If scene is not perceived to have changed, features are not re-encoded
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Losing Sight of our Purpose

Can lose sight of overall goal when attention is compromised

-Seminary students experiment
Distractions vs Disruptions

Distraction-Constant tug, can be conscious, pre-conscious, sub-conscious

Disruption-Something that you must attend to
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Distractions vs Disruptions

External- In the environment-you can take steps to physically separate yourself

Internal- thoughts and automatic scripts, anxiety, preoccupation

Types of distractions
Distractions

- Sounds
- Smells
- Sensory (such as temperature)
- Preoccupation

Types of preoccupation
Preoccupation
An involuntary pattern of thought regarding an unmet need

-Such as a shortage of time

Captures our attention and impedes our ability to focus-narrows our “bandwidth”
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Preoccupation Diminishes our bandwidth for:

Cognitive capacity- ability to solve problems, retain information and engage in logical reasoning

Executive control- ability to manage cognitive activities-planning, attention, starting and stopping actions

Fluid intelligence
Preoccupation

Research shows we pay an IQ penalty average of 13 points for preoccupation.

Move from
- average intelligence
To
- Borderline deficient

Make more impulsive decisions (# recall with choice)
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Preoccupation

Scarcity is one of our worst “recurring distractions”
Creates a powerful goal to meet an urgent need
Difficult to rid ourselves of the repeating script which is always “running in the background”
Concerns over:
Money & (ironically) Time

Commit to a one-time action to free-up bandwidth
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Fluid Intelligence
How many items in the string?

Research-Experiment with hypothetical car problem then provide answers
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Fluid Intelligence

How many items in the string?

FFF
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Fluid Intelligence
How many items in the string?

HHHHHHHH
Fluid Intelligence
How many items in the string?

AAAA
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Fluid Intelligence
How many items in the string?

44444
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Fluid Intelligence

How many items in the string?

5555
Task Type: Creative vs. Logical

Creative Tasks
Suffer more from pressures- limitations, distractions, and structure/rules

Logical tasks
Can improve under low pressure but suffer increasingly as pressure increases into moderate/extreme

Physical tasks
Can improve under moderate pressure but suffer under extreme pressure
Know your rhythm
- Early in day
  - More open minded, less has happened to be on your mind - may be more creative
  - Energetic or slow?
- Later in day
  - More energy, or tired?

Be aware of your best times for creative, physically demanding, or logical tasks

Know yourself and your limitations or strengths after:
- A stressful event (time for physical task?)
- Meals (time for logical task?)
- A period of rest (time for creative task?)
Choking vs. Panic

The part of the brain that handles new learning is different than the part of the brain that handles memory and memorized activities.

- **Memorized tasks** - Cerebrum - automatic and extremely fast

- **New learning** - cerebellum handles motor learning, parts of temporal lobe handle other types of learning - slower
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Choking vs. Panic

**Choking** is when you ignore your intuition and think too much about the steps you are taking (not automatic enough)

**Panic** is when you follow your intuition (too automatic) instead of stopping to think about the steps you should be taking
So...when should you follow intuition?

Use intuition
For learned activities—highly automated—normal circumstances

Think about it more
For new activities, or abnormal circumstances
Motivation

Example:
Does higher pay always mean better performance?
   Changes the way you view the task-why you do the task

Also assumes more motivation means higher performance-not always true
Creates more pressure and more pressure works against creative tasks
The importance of taking breaks

- Heavy concentration causes fatigue
- Fatigue results in diminished attentional control

- Give your mind an easier task every 20-30 minutes for a few minutes
- Take a longer break every 2-3 hours
  - Improves control and judgment
  - Can allow elusive answers to appear

Our mind will force the breaks if you don’t take them voluntarily

- Research shows that we spend 30%-47% of our waking hours daydreaming

We benefit from taking a walk—even if it is a “Mental Walk”—spurs those spatial parts of our brain... and speaking of that
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