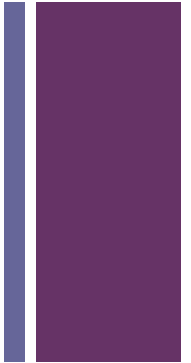


# The Psychology of Creativity

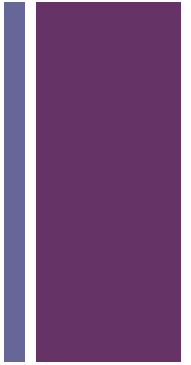
Dr. Megan Parker Peters

# + The Psychology of Creativity

- Small groups of 3-5.
- Think of someone who you agree is creative.
- What makes this person creative?



# + The Psychology of Creativity: Outline



- Is this different from critical thinking?
- Is everyone creative?
- Can we assess creativity?
- Can creativity develop or grow?

# + Psychology of Creativity:

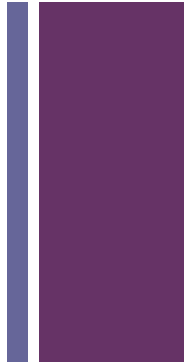
## Analytic, Synthetic, and Practical Abilities

- **Synthetic ability:** ability to generate novel and interesting ideas.
- **Analytic ability:** analyzes and evaluates ideas. The creative individual uses analytic ability to work out the implications of a creative idea and to test it.
- **Practical ability:** the ability to translate theory into practice and abstract ideas into practical accomplishments. The creative person uses practical ability to convince other people that an idea is worthy (Sternberg & Williams)
- **Why are all 3 abilities important in creativity? What if someone just had analytic abilities? Practical? Why would this not be optimal for creativity?**

# + Creativity vs Critical Thinking

- Creative thinking involves searching for meaningful new connections by generating many unusual, original, and varied possibilities.
- Critical thinking involves examining possibilities carefully, fairly, and constructively—focusing your thoughts and actions by organizing and analyzing possibilities, refining and developing the most promising possibilities, ranking or prioritizing options, and choosing certain options (Treffinger, 2008).
- How are these similar? Different?
- Is one more important than the other?

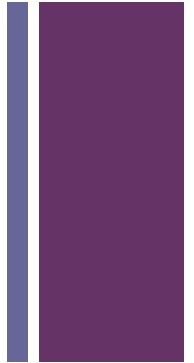
# + Creativity vs Critical Thinking



Tools for Generating Possibilities (Creative Thinking)	Tools for Focusing Possibilities (Critical Thinking)
<p><b>Brainstorming.</b> Generating many, varied, or unusual options for an open-ended task or question.</p>	<p><b>Hits and Hot Spots.</b> Selecting promising or intriguing possibilities (identifying hits) and clustering, categorizing, organizing, or compressing them in meaningful ways (finding hot spots).</p>
<p><b>Force-Fitting.</b> Using two objects or words that seem unrelated to the task or problem, or to each other, to create new possibilities or connections.</p>	<p><b>ALoU: Refining and Developing.</b> Using a deliberate, constructive approach to strengthening or improving options, by considering <i>advantages, limitations</i> (and ways to <i>overcome</i> them), and <i>unique features</i>.</p>
<p><b>Attribute Listing.</b> Using the core elements or attributes of a task or challenge as a springboard for generating novel directions or improvements.</p>	<p><b>PCA: Paired Comparison Analysis.</b> Setting priorities or ranking options through a systematic analysis of all possible combinations.</p>
<p><b>SCAMPER.</b> Applying a checklist of action words or phrases (idea-spurring questions) to evoke or trigger new or varied possibilities.</p>	<p><b>Sequencing: SML.</b> Organizing and focusing options by considering <b>short, medium, or long-term</b> actions.</p>
<p><b>Morphological Matrix.</b> Identifying the key parameters of a task, generating possibilities for each parameter, and investigating possible combinations (mixing and matching).</p>	<p><b>Evaluation Matrix.</b> Using specific criteria to systematically evaluate each of several options or possibilities to guide judgment and selection of options.</p>

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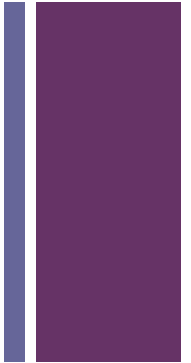
# + The Psychology of Creativity



- Is everyone creative?
- Creative idea generation not common for most individuals in organizations (Egan, 2005).
- Common characteristics (Oldham & Cummings, 1996):
  - Broad interests
  - Attraction to complexity
  - Intuition
  - Aesthetic Sensitivity
  - Tolerance of ambiguity
  - Self-confidence

# + The Psychology of Creativity

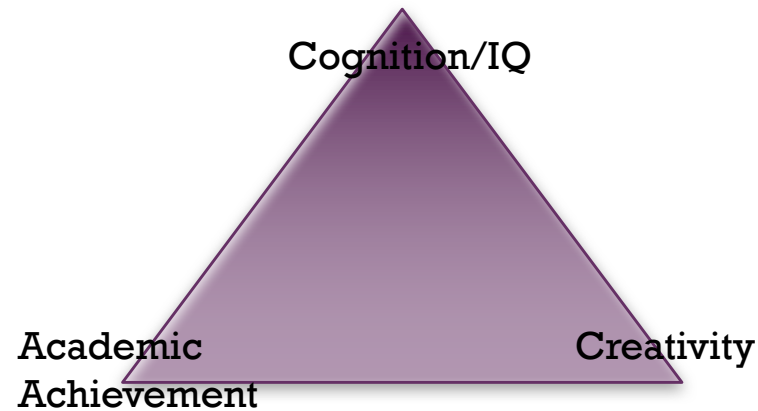
- What makes someone or something creative?
- Age?
- Education?
- Gender?
- Personality factors?





# + Can we assess creativity?

- Education: TN includes Creativity as an element of Intellectual Giftedness



- Should creativity be included?

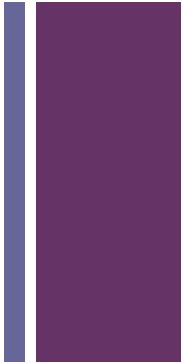
# + Can we assess creativity?

## ■ Education:

- TN includes Creativity as an element of Intellectual Giftedness

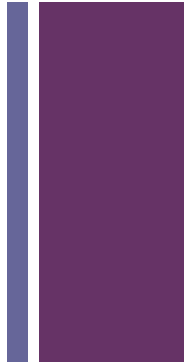
## Should creativity be included?

- IQ 120+: relationship between IQ and creativity weakens
  - Fuchs-Beauchamp, Karnes, & Johnson, 1993
- Difficult to distinguish ability & creativity in tails?
- Metacognition levels relation to creativity?



# + Can we assess creativity?

- Education: TN includes Creativity as an element of Intellectual Giftedness
- Possible Assessment Tools
  - TN Creative Product or Portfolio (p. 29)
  - TN Creative Thinking Scale (p. 21)
  - TN Teacher Observation Checklist (TN Toc; p. 23)
  - Creative Personality Scale
  - Torrance Test of Creative Thinking
- Are these measures valid; do they measure creativity?

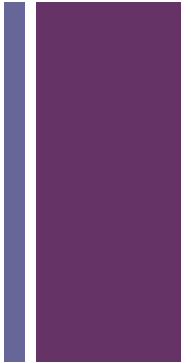


# + Creativity: Torrance Test of Creative Thinking (TTCT)

- Developed by E. Paul Torrance at University of Georgia
- **ONLY** Nationally normed test of creativity for children and adults
- 2 Forms: Figural (drawing) and Verbal
- Characteristics measured: Fluency, elaboration, originality, flexibility
  - These 4 characteristics comprised Torrance's definition of creativity

# + Identification: Creativity

- Your turn:
  - Try the Torrance
  - Circles
  - 10 minutes



# + Creativity:

## Torrance Test of Creative Thinking (TTCT)

- Characteristics of interest: Fluency, elaboration, originality, flexibility
- The test measures *divergent thinking* across four sub-categories:
  - **1. Fluency** - number of ideas generated
  - **2. Originality** – how uncommon those uses are (e.g. “router restarter” is more uncommon than “holding papers together”)
  - **3. Flexibility** – how many areas your answers cover (e.g. cufflinks and earrings are both accessories, aka one area)
  - **4. Elaboration** – level of detail in responses; “keeping headphones from getting tangled up” would be worth more than “bookmark”
- TTCT also evaluates creative strengths: emotional expressiveness, articulation of stories, movement, titles, synthesis, unusual visualization, humor, richness of imagery, fantasy

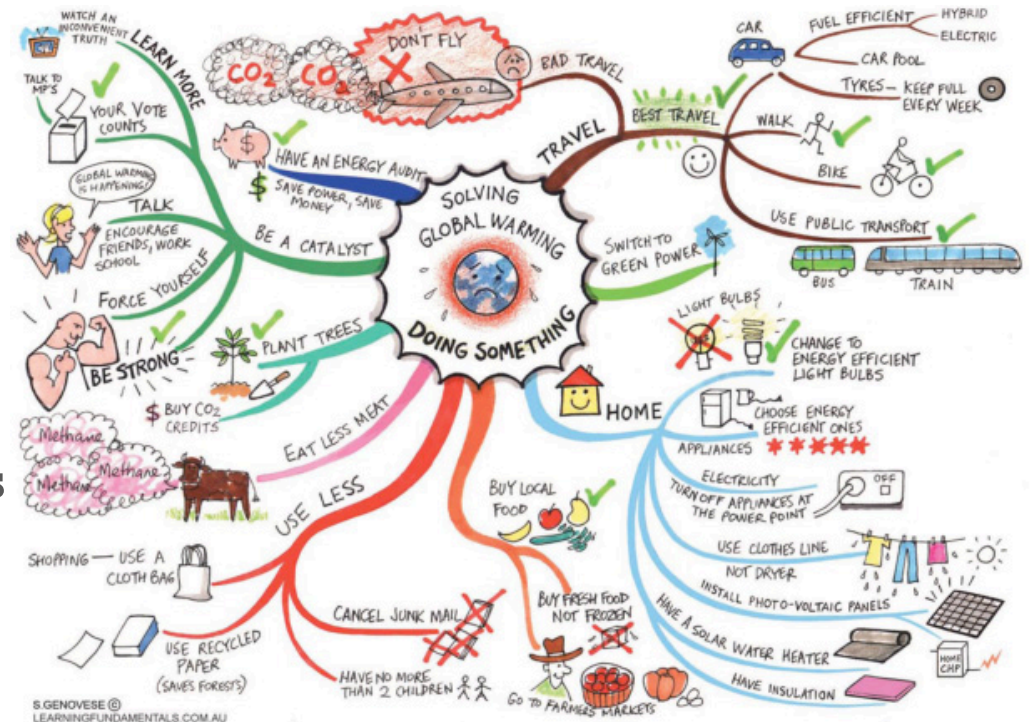
# + Fluency

- Ability to generate large numbers of distinct ideas (brainstorm)
- Fluency is the heart of the TCCT; if an item is not marked as “fluent,” it is not scored any further

## ■ Rules for Fluency:

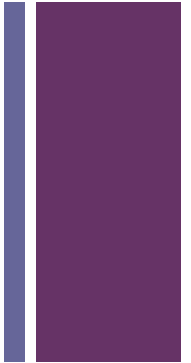
- Must use the provided stimulus
- Must be recognizable or appropriately titled
- Fluency is scored as “1” or “0”
- Count the number of different items

## ■ How did you do?



# + Originality

- Uniqueness or unusual nature of responses
- Did you generate an idea that is unlike anyone else's?
- Originality Scoring Rules:
  - Score 1 point for all fluent responses that are **not** found on list below
  - Animal, apple, ball, balloon, car, cat, circle, clock, watch, coin, dots, earth, globe, planet, geometric design, human face/figure, letters of alphabet, numerals, moon, pie, sign, symbol, snowman, sun, wheel, tire, stoplight, eyes, glasses, egg, fruit
- How did you do?



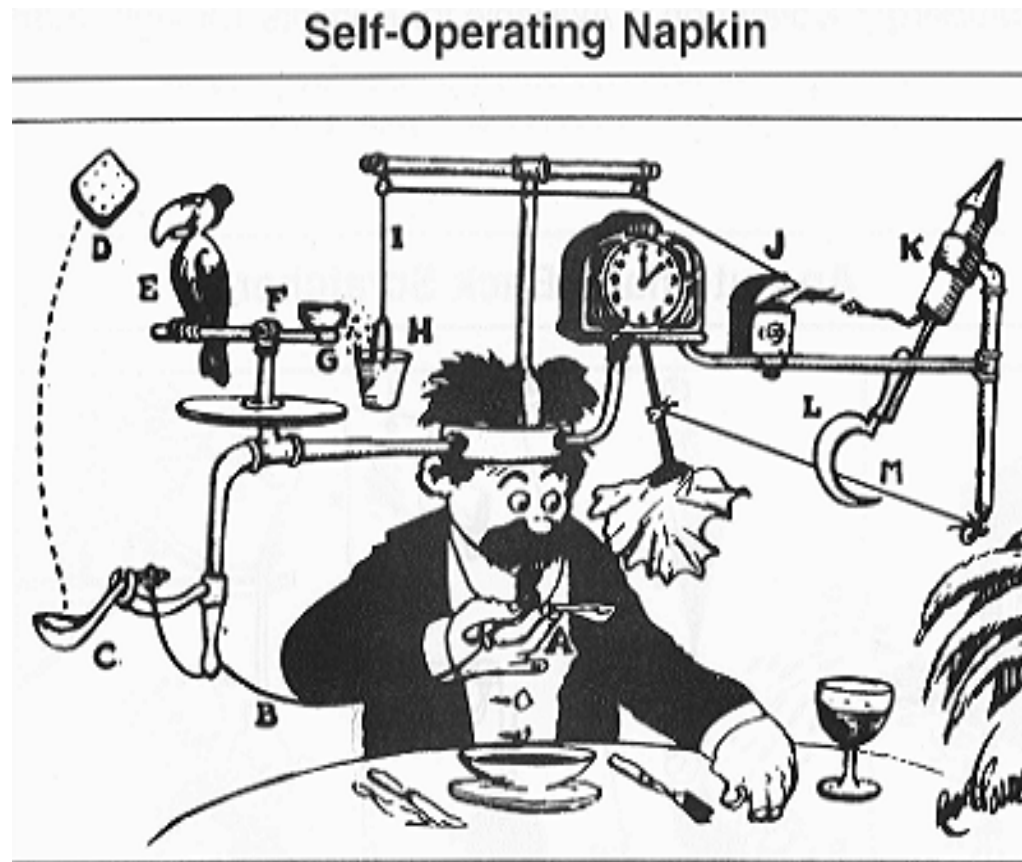


# + Elaboration

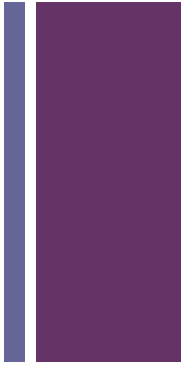
- Ability to take a basic idea and build on it with additional ideas
- Reflects imagination and ability to fill in details

## ■ Rules for Scoring Elaboration:

- Only Score items that are Fluent
- One point given for each relevant detail or idea. One item could earn endless points for elaboration!
  - Decoration, details, embellishment
  - Shading
  - Titles that describe
  - Dimension
  - Unusual position



# + Flexibility



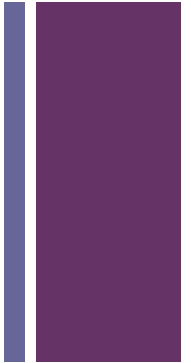
- How many areas or categories your drawings represent
- Example: cufflinks and earrings are both accessories, which is one category
- Did you make all of your circles into one category of items? Are they all different categories?
- How did you do? Count your categories.

# + Can you develop creativity?

- What conditions promote creativity growth?

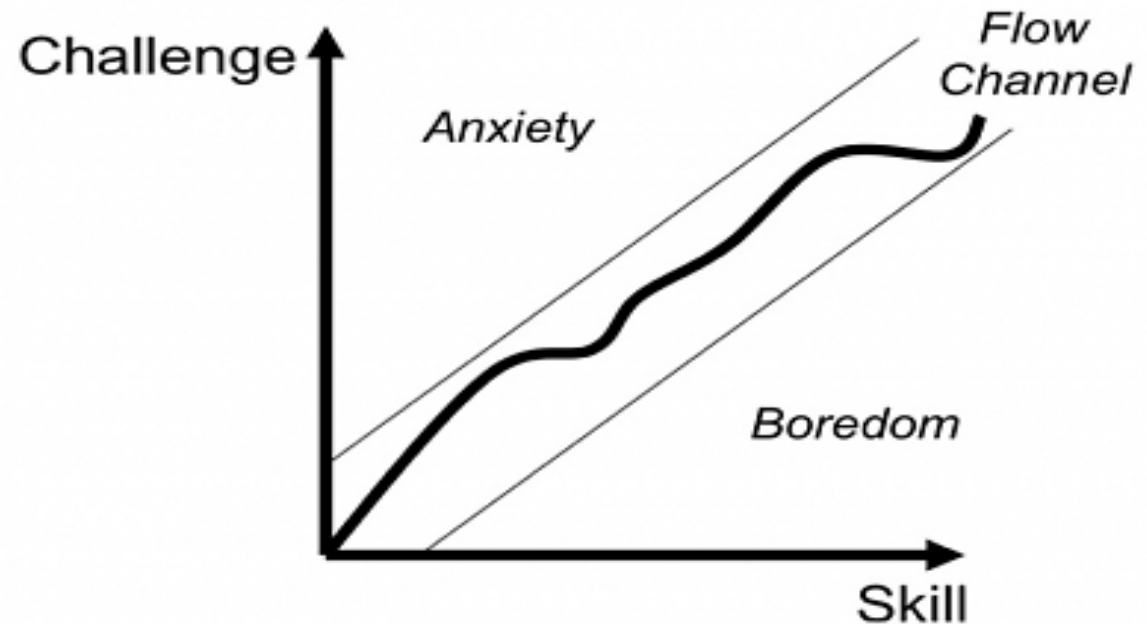
- MUSIC model (Henry, 2009)

- Motivation- high and internal
- Uncommon Commitment
- Skill
- Imagination
- Courage



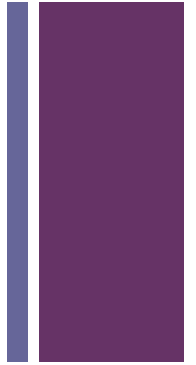
# +Can you develop creativity?

- What conditions promote creativity growth?
- Creativity is supported by...
  - Positive role modeling
  - Complex, challenging tasks are offered
  - Noncontrolling, supportive feedback behavior
  - Employee perception that creativity is valued
  - Goal setting associated with creativity



"Flow" concept by Mihaly Csikszentmihalyi. Drawn by Senia Maymin.

# + One thing in common...



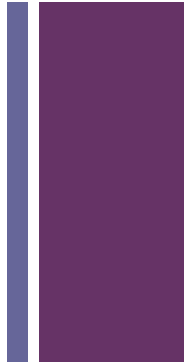
- Creative people vary in many ways, but they share one common quality in every study I have seen:

■ **THEY LOVE WHAT THEY DO!**

- M. Csikszentmihalyi

# + Creativity: Final Thoughts?

- What did you learn about creativity? (yellow)
- What is one thing or one area that you want to do to improve your creativity? (green)



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