CREATIVITY IN CONTEXT:

From the Person to the Planet

Teresa Amabile · ESM · Global Creativity and Innovation Indexes

Workshop 2 of 2

WHERE WE LEFT OFF

- High-quality measurement combines validity (face, content, construct, predictive, ecological), reliability, cross-cultural equity and feasibility.
- Four quadrants: I (subjective) · IT (objective) · WE (intersubjective) · ITS (interobjective).
- Tools so far: creative self-beliefs, TTCT, RAT, CAQ, Runco scale, ESM/EMA, CAT, SOQ.
- Today: how context shapes creativity, and how we measure it at scale.



TODAY'S PLAN AND LEARNING OUTCOMES

THEORY

Amabile's componential theory and the work environment.

LIVE ESM

Four short pings on ourselves, then a look at what self-report data can show.

INDEXES

The Global Innovation Index and the Global Creativity Index, and their limits.

DEBRIEF

Our own data: what did it show, and what can it not show?

What can our data show, and what can it not show?

ESM BRIEFING

1. You are both participants and researchers.
2. Four short pings. The same questions every time, about 60 seconds.
3. Anonymous and voluntary. Make your own code: first two letters of a pet’s name + your birth month.
4. Notice your experience. Don’t try to be creative on purpose.

The room opens each ping for you. No code to remember: your phone keeps it.



Scan · the room already knows which ping this is

Ping 1

0:05 · 90-second window

AMABILE I

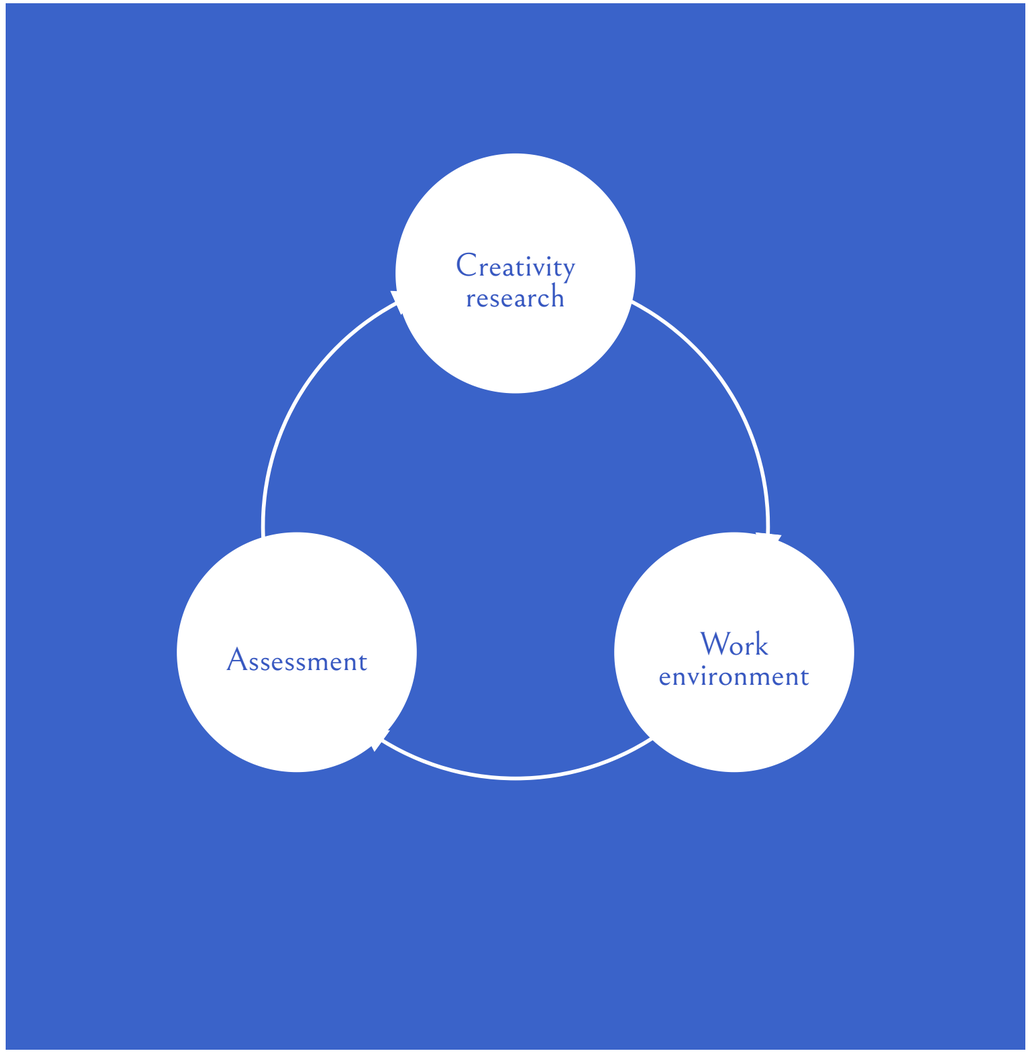
THE SOCIAL PSYCHOLOGY OF CREATIVITY

0:10 – 0:40

AMABILE I

WHO IS TERESA AMABILE?

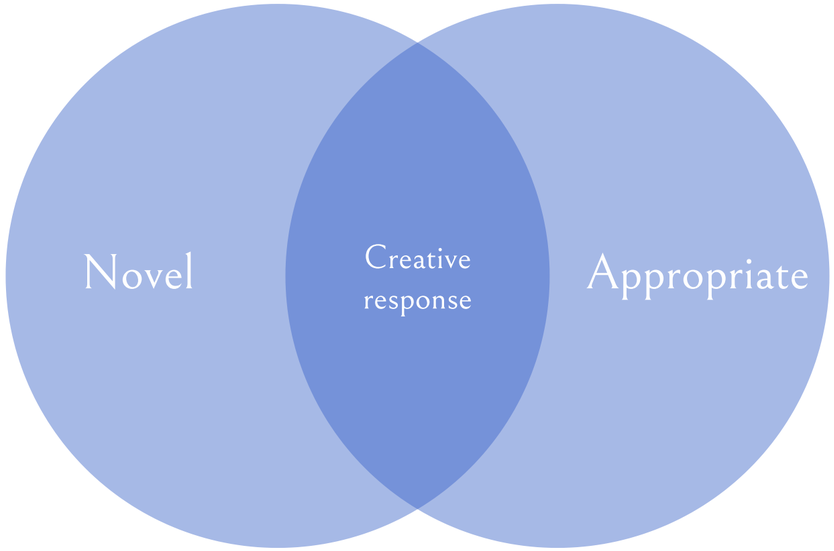
- Social psychologist; Professor Emerita at Harvard Business School.
- Founded the modern social psychology of creativity (1979 onward).
- Created the Consensual Assessment Technique, CAT (Monday!).
- Co-developed KEYS (work environment) and the research on inner work life.



WHAT COUNTS AS CREATIVITY?

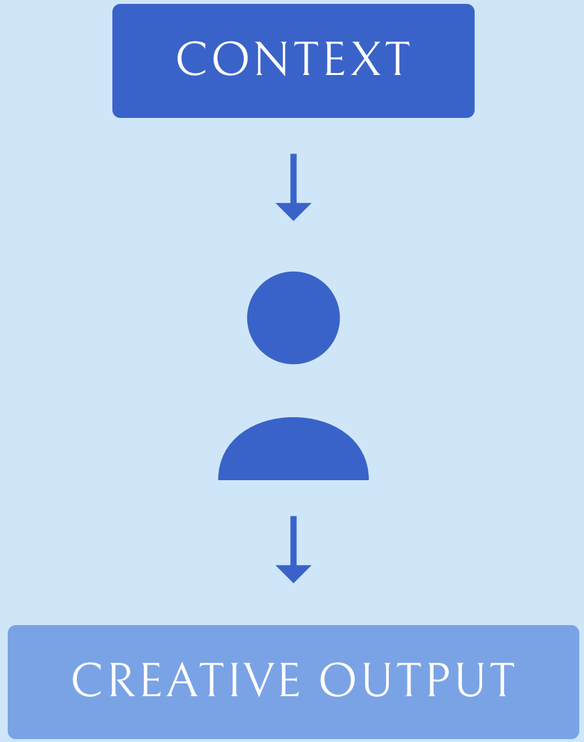
A response that is novel and appropriate (useful, valuable) to a task or goal that is heuristic rather than algorithmic.

- Creativity is the idea; innovation is its successful implementation (Amabile, 1988).
- Matches the field's standard definition: originality + effectiveness (Runco & Jaeger, 2012).



CONTEXT CAN CHANGE CREATIVITY

- Before Amabile, creativity was mostly treated as a personality trait or a cognitive ability.
- Her studies showed the social environment can raise or lower creativity in the same person.
- Early evidence: expecting external evaluation or reward reduced artistic and writing creativity (Amabile, 1979, 1985).

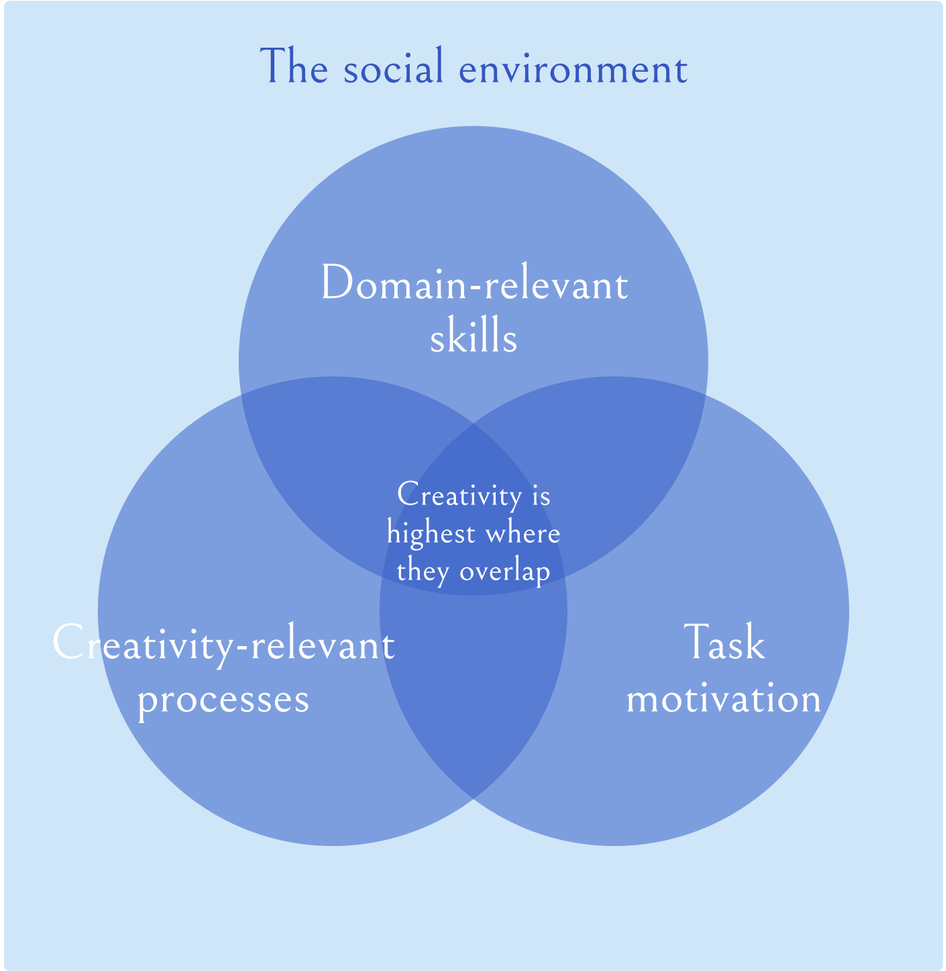


AMABILE, 1983 · 1996

THE COMPONENTIAL THEORY

1. Domain-relevant skills: knowledge, technical skill, talent.
2. Creativity-relevant processes: cognitive style, heuristics, risk-taking, working style.
3. Task motivation: especially intrinsic motivation.
4. Social environment: the work or learning context.

Three components inside the person, one outside.
Creativity is highest where all of them overlap.

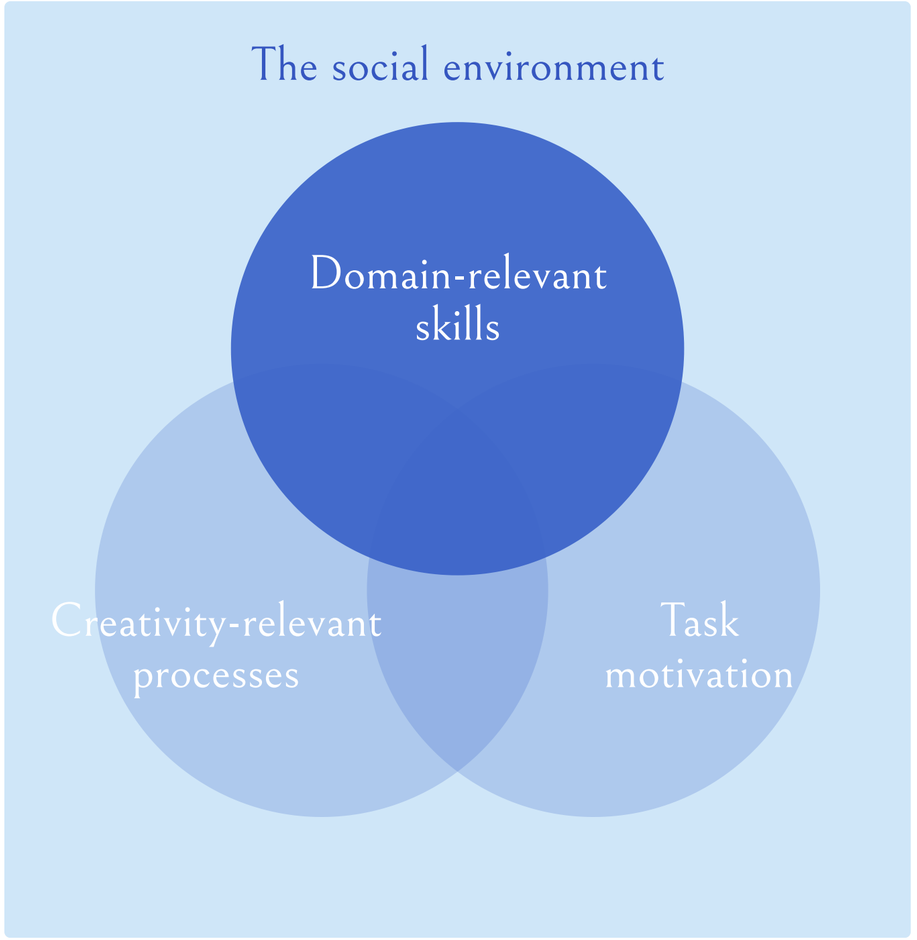


COMPONENT 1

DOMAIN-RELEVANT SKILLS

- The “raw material”: factual knowledge, technical skills, special talents.
- They set the “performance space” of possible responses.
- Education, practice and exposure expand the space.

Link to Monday: the content validity of any creativity test depends on defining the domain.

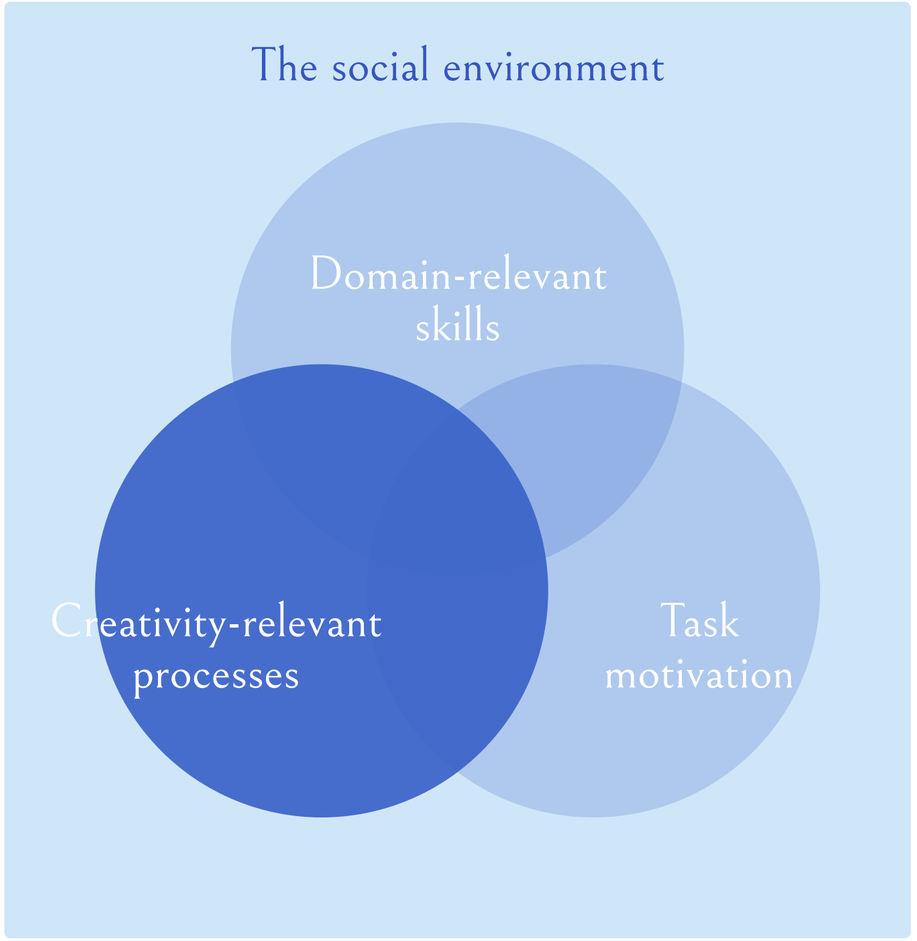


COMPONENT 2

CREATIVITY-RELEVANT PROCESSES

- Flexible thinking, breaking mental sets, exploring new perspectives.
- Personality: tolerance of ambiguity, independence, risk-taking.
- Work style: persistence, energy, deferring judgment.
- Can be trained, for example with divergent-thinking strategies.

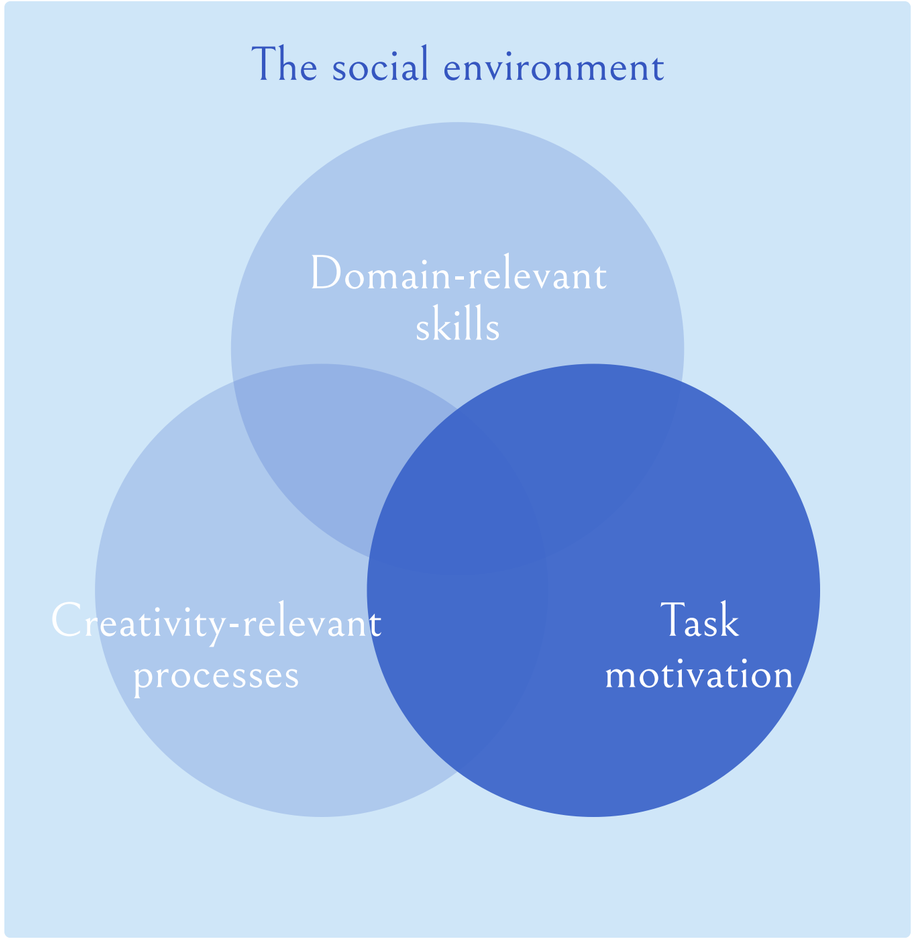
Link to Monday: fluency, flexibility, originality (TTCT) and remote associations (RAT).



COMPONENT 3

TASK MOTIVATION

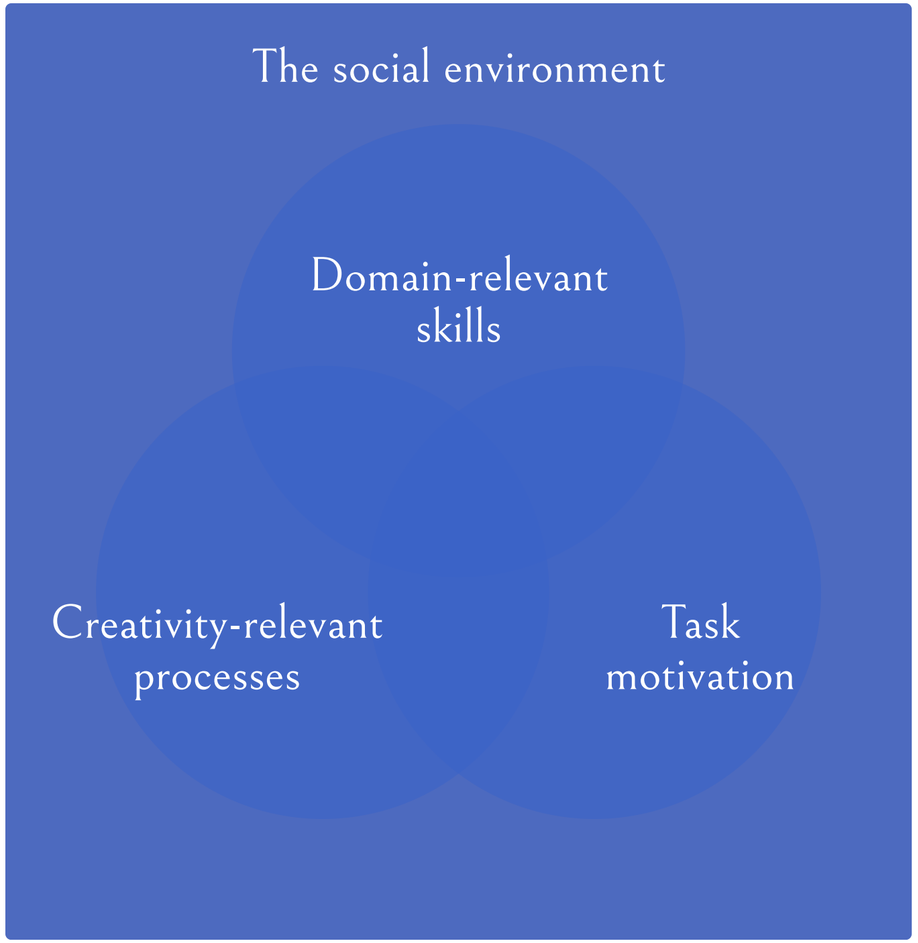
- Decides what a person will actually do with their skills and processes.
- Intrinsic motivation principle: people are most creative when driven by the interest, enjoyment, satisfaction and challenge of the work itself.
- Extrinsic motivators can undermine creativity, especially when they feel controlling.
- Motivational synergy: extrinsic motivators that inform or enable (recognition of competence, useful resources) can help (Amabile, 1993).



COMPONENT 4

SOCIAL ENVIRONMENT

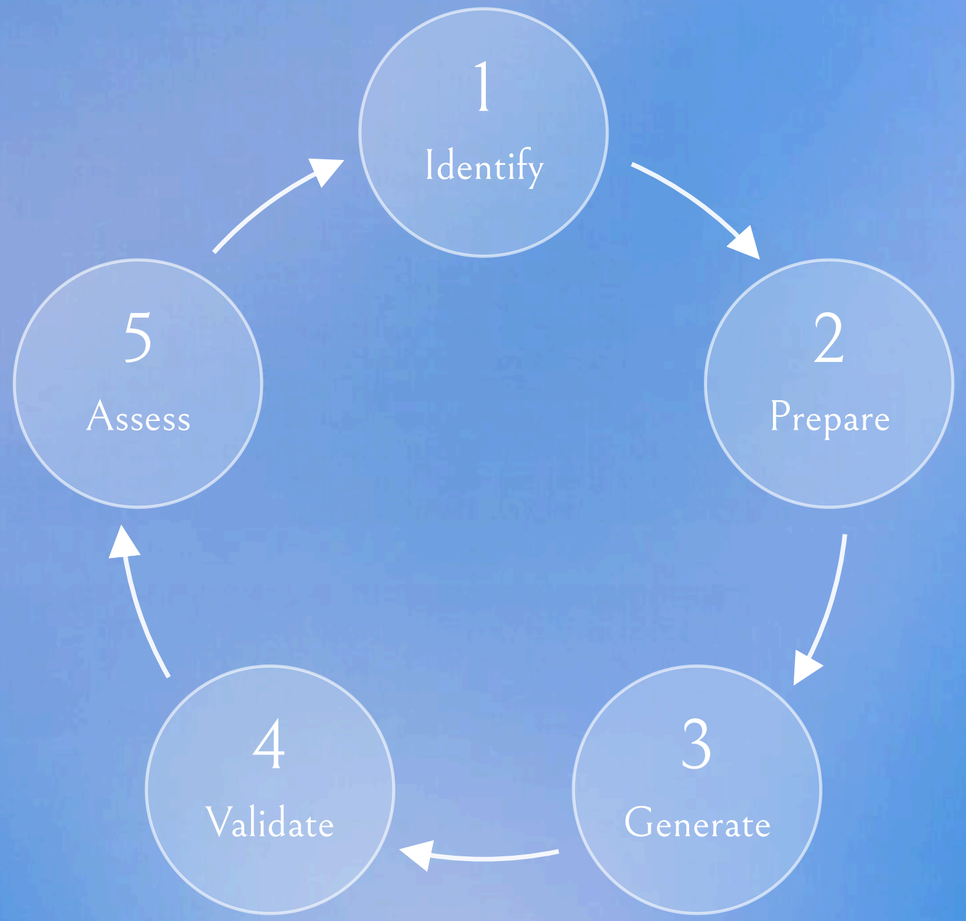
- Added to the model in 1996: culture, supervisors, colleagues, resources, time.
- Shapes creativity mainly through motivation (and, over time, skills).
- The most directly changeable component for managers and teachers.



THE CREATIVE PROCESS: FIVE STAGES

1. Problem or task identification
2. Preparation
3. Response generation
4. Response validation
5. Outcome assessment: success, failure or progress loops back

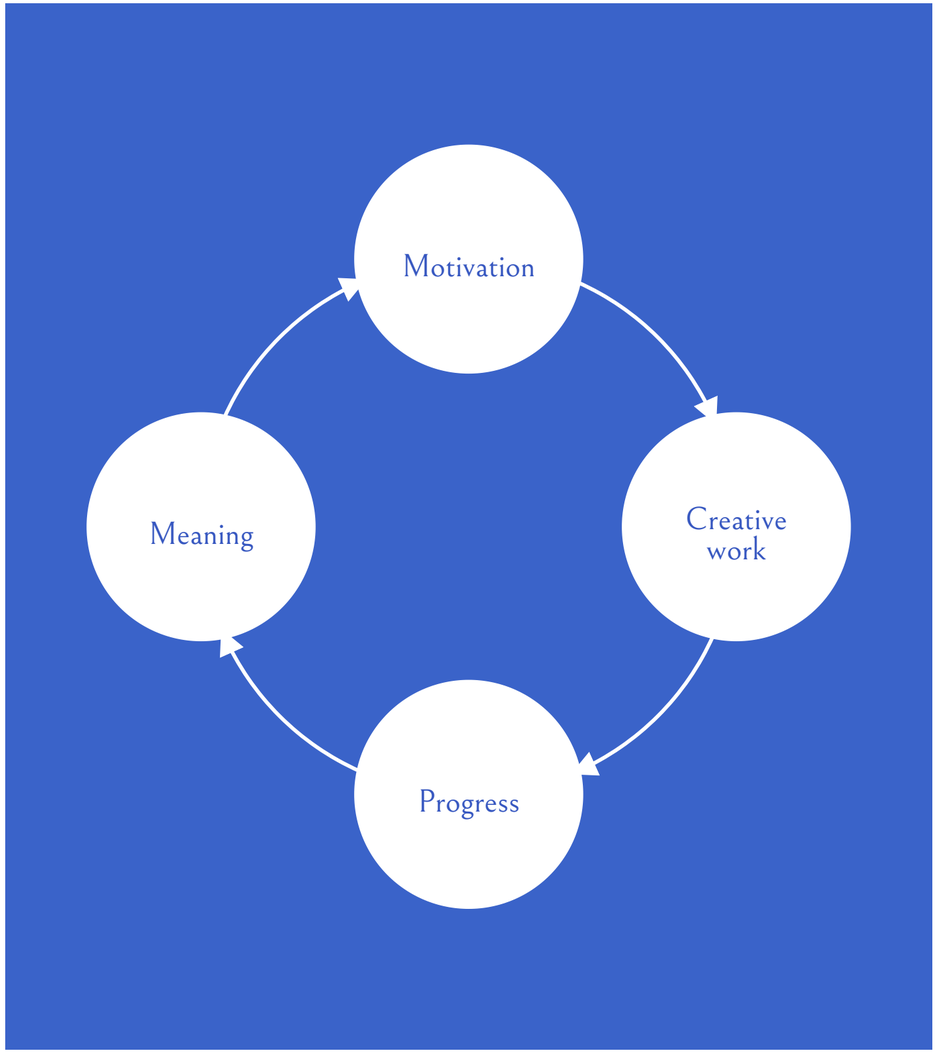
Each component matters at a different stage: motivation at identification, skills at preparation.



UPDATING THE MODEL

THE DYNAMIC COMPONENTIAL MODEL

- Amabile and Pratt (2016) add dynamics: creativity and innovation unfold over time.
- Feedback loops: making progress and making meaning feed motivation and later performance.
- Includes organizational and team levels, and the step from creativity to innovation.
- Key point: the model is a system, not a trait list.



PREVIEW OF MY POINT OF VIEW

MAPPING TO THE QUADRANTS

Amabile's theory sits across three quadrants. The indexes we meet later sit in the fourth.

A preview of my point of view.

I

SUBJECTIVE

Task motivation

IT

OBJECTIVE

Skills and processes

WE

INTERSUBJECTIVE

Social environment

ITS

INTEROBJECTIVE

Indexes (next)

ACTIVITY A · 15 MIN · PAIRS

MAP THE COMPONENTS

- Pick a real creative project: a course project, a job task, a hobby.
- Fill in the four boxes.
- Which component is weakest? What single change in the environment would help most?
- Share one insight with the class.

Ping 2 lands in the middle of this.

SKILLS

What do you know and can do?

PROCESSES

How do you work and think?

MOTIVATION

Why are you doing it?

ENVIRONMENT

Who and what is around it?



Scan · the room already knows which ping this is

Ping 2

0:45 · 90-second window

BREAK

TEN MINUTES

0:55 – 1:05

AMABILE II

ENVIRONMENT AND MEASUREMENT

1:05 – 1:30

MEASURING THE WORK ENVIRONMENT

KEYS

- Amabile et al. (1996): a validated scale of the perceived environment for creativity.
- Six stimulants, two obstacles.
- Compare the Situational Outlook Questionnaire from Monday: Freedom, Trust and Openness, Idea Time...

Stimulants

Organizational encouragement

Supervisory encouragement

Work-group support

Freedom

Sufficient resources

Challenging work

Obstacles

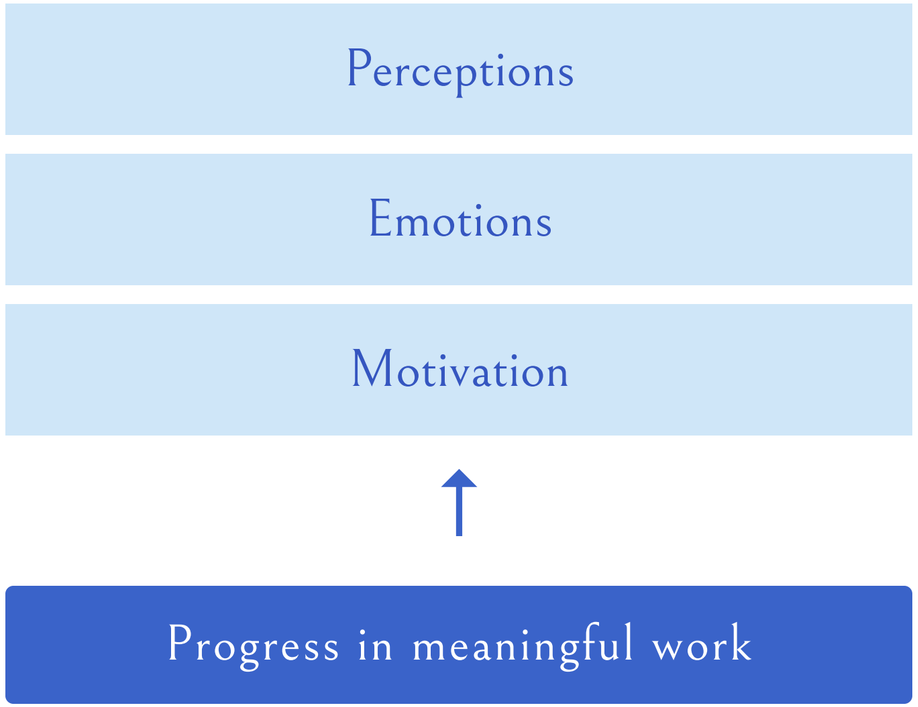
Organizational impediments

Workload pressure

AMABILE & KRAMER, 2011

INNER WORK LIFE AND THE PROGRESS PRINCIPLE

- Daily diaries of knowledge workers tracked perceptions, emotions and motivation (Amabile & Kramer, 2011).
- Positive affect on a given day predicted more creative thinking that day and the next (Amabile et al., 2005).
- Progress principle: of all workday events, making progress in meaningful work lifted inner work life the most.
- Note the method: a diary study is close kin to ESM.



TIME PRESSURE

THE CREATIVITY TRADE-OFF

- High time-pressure days showed lower creative thinking, with a “hangover” the days after (Amabile, Hadley & Kramer, 2002).
- People often felt more creative under pressure, but were not rated that way.
- Lesson: self-perception (I) and observed output (IT) can diverge, so measure both.

Ping 3 is coming.

I

HOW IT FELT

“I was more creative under pressure.”

IT

WHAT WAS OBSERVED

Less creative thinking, that day and after.



Scan · the room already knows which ping this is

Ping 3

1:20 · 90-second window

DISCUSSION

1. Where has a particular environment helped or blocked your creativity?
2. Which of the eight KEYS scales would you most want to measure in your own setting?
3. How would you measure it so it isn’t biased by one person’s mood that day?

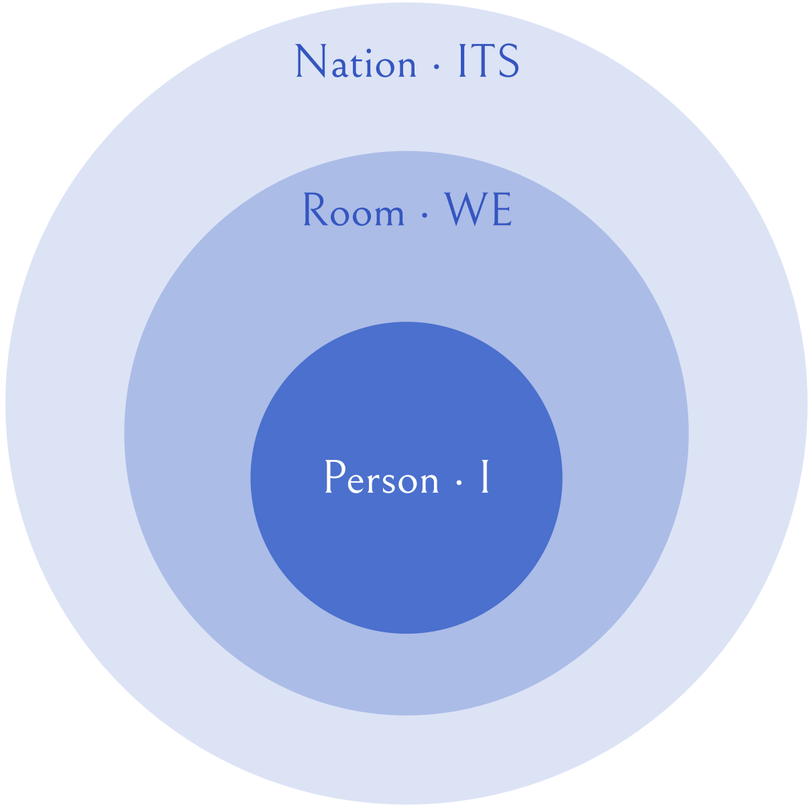
ZOOMING OUT

FROM THE PERSON TO THE NATION

1:30 – 1:55

FROM THE PERSON TO THE NATION

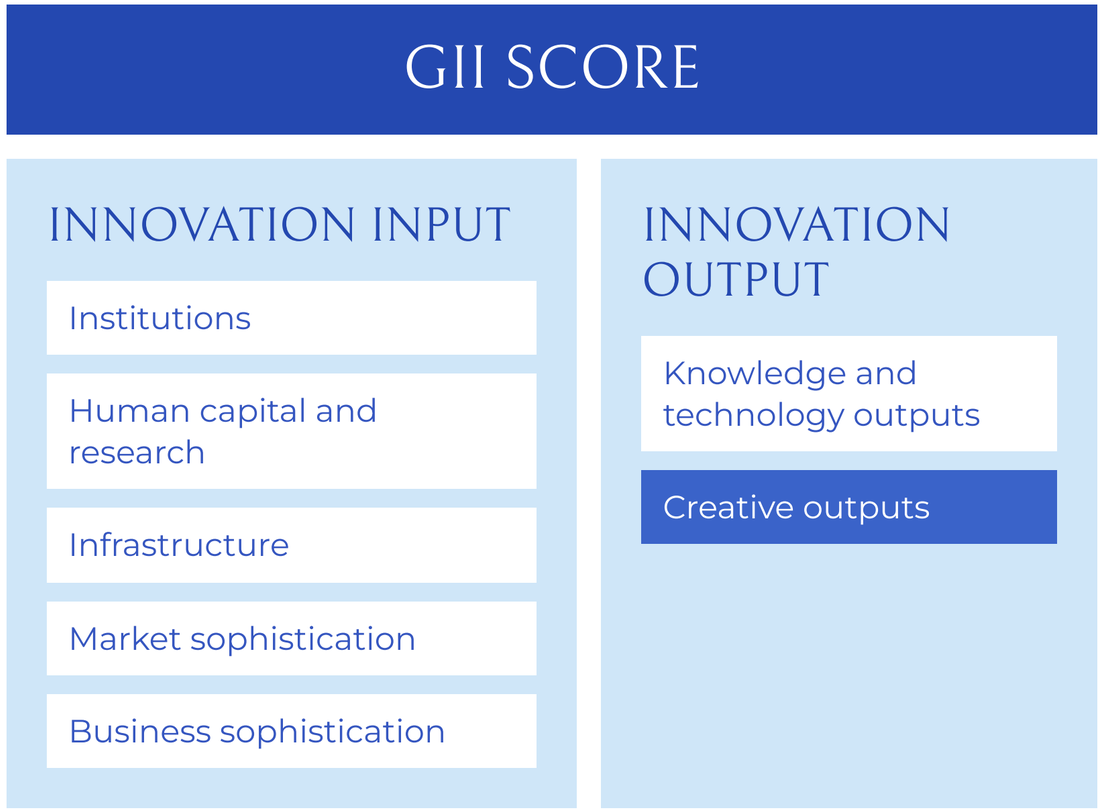
- If environments shape creativity, can we measure them across countries?
- Two flagship attempts: the Global Innovation Index (GII) and the Global Creativity Index (GCI).
- Quadrant: ITS (systems, networks, technology, ecology).



WIPO · ANNUAL

GLOBAL INNOVATION INDEX

- Published every year by WIPO (with INSEAD and Cornell's Johnson School historically).
- GII 2026 ranks 139 economies on roughly 80 indicators (WIPO, 2026).
- The score is the average of two sub-indices.
- Creative outputs include intangible assets, creative goods and services, and online creativity.



GII 2026

HEADLINE RESULTS

- No new economy entered the top 15; Europe holds 14 of the top 25.
- UAE enters the top 25 for the first time (25th, up from 30th).
- 21 economies innovate above their level of development, led by India and Viet Nam.
- Theme: entrepreneurs at the frontier of science (deep-science startups, AI-driven investment).

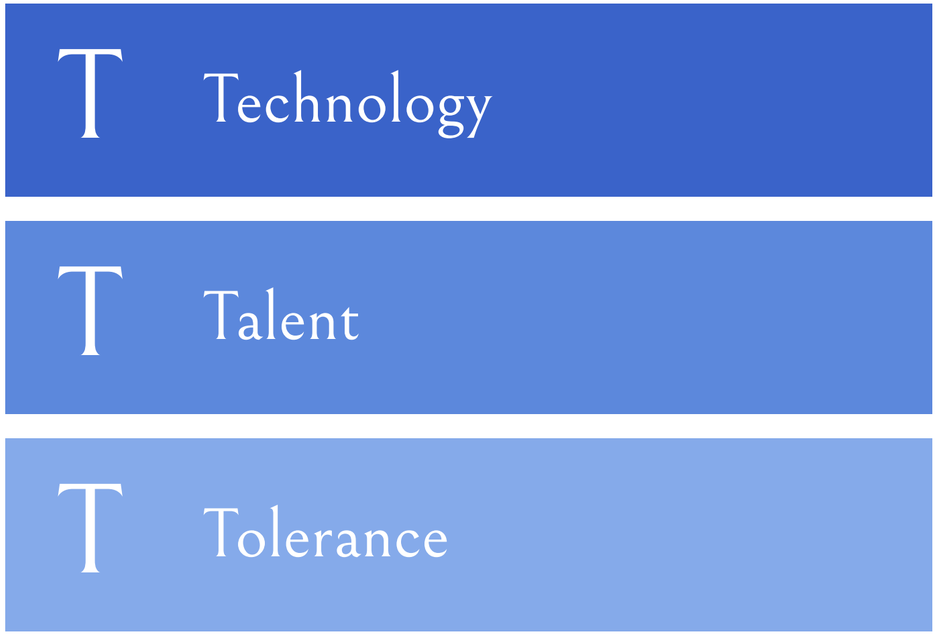
1	Switzerland 1st for a 16th year in a row
2	Sweden
3	United States
4	Republic of Korea
5	Singapore

FLORIDA, MELLANDER & KING, 2015

GLOBAL CREATIVITY INDEX

- Florida, Mellander and King (2015), Martin Prosperity Institute.
- Ranks about 139 countries on the “3 Ts”.
- Premise: creativity drives the economy; open, diverse places attract creative people.
- Top of the 2015 edition: Australia, United States, New Zealand, Canada, Denmark.

The GCI has not been updated on a regular cycle.



GII VS GCI AT A GLANCE

	GLOBAL INNOVATION INDEX	GLOBAL CREATIVITY INDEX
PURPOSE	Innovation capability and output	Conditions that attract and use creative talent
FOCUS	Institutions, R&D, patents, trademarks, creative outputs	Technology, talent, tolerance
CADENCE	Annual	2015 (periodic)
STRENGTH	Comparable, transparent, widely used in policy	
WEAKNESS	Both are national-scale, composite and mostly objective data	

CRITICAL LENS: ARE INDEXES VALID MEASURES?

CONSTRUCT VALIDITY

Does a patent count equal creativity? Does “tolerance” capture inclusion?

ECOLOGICAL VALIDITY

National averages hide local differences: clusters, cities, communities.

CROSS-CULTURAL EQUITY

Indicators favor formal, IP-protectable, market-based creativity. Everyday and informal creativity is invisible.

RELIABILITY

Rank changes can reflect methodology and data revisions as much as real change (WIPO says so in its own appendix).

WEIGHTING

Composite indexes need careful weighting and sensitivity analysis (Nardo et al., 2008).

THE CREATIVE CLASS

For a critique of the thesis behind the GCI, see Peck (2005).

10 MIN · GROUPS OF 3–4

SMALL-GROUP TASK

1. Choose one country.
2. Where does it sit on the GII? What would Amabile say about its likely social environment?
3. Which component can the index see, and which can it not?
4. Report one blind spot to the class.

Ping 4 lands during this task.

What can the index see?
What can it not see?



Scan · the room already knows which ping this is

Ping 4

1:50 · 90-second window

ACTIVITY B

OUR ESM DATA

1:55 – 2:20

ACTIVITY B

ESM DEBRIEF

Open the live debrief in the ping room: every answer is already there, grouped by ping.

Questions to ask the data:

a) How did mood, energy and creative engagement change across the four pings?

b) Was creative engagement higher when challenge and skill were both high (flow)?

c) Was it higher when people felt free to share unusual ideas?

d) Did the activity type (listening, discussing, making) matter?

Compare change within each person with differences between people.



Live debrief

READING THE RESULTS

- Plot the class means across the four pings (line chart).
- Pairwise: creative engagement vs challenge–skill balance, and vs perceived freedom.
- Expect noisy data: n is small and the pings were few.
- Discuss: what supports Amabile? What would a stronger design look like?

These three charts draw themselves in the room while people answer.

WHAT OUR ESM CAN AND CANNOT TELL US

STRENGTHS

In the moment. Less recall bias. Captures variation within people.

LIMITS

Reactivity. Self-report only. A tiny sample. A classroom is not everyday life.

ECOLOGICAL VALIDITY

Improve it with week-long signals in natural settings.

TRIANGULATION

Pair it with objective data: a product rated with CAT, or sensor data.

MY POINT OF VIEW

CREATIVITY IS MEASURED BEST IN LAYERS

2:20 – 2:30

MY POINT OF VIEW

MEASURED BEST IN LAYERS

- Person, situation and society each tell part of the story, and none is enough alone.
- Amabile's work shows the same person can be more or less creative depending on context.
- National indexes show where conditions concentrate, but not how they feel to the people inside them.
- Good practice: pair an ITS index with WE (climate) and I (ESM) data.



THE COMPLETED QUADRANT MAP

The quadrants are lenses, not silos. The best studies cross them.

I

SUBJECTIVE

Creative self-beliefs

ESM mood and motivation items

IT

OBJECTIVE

TTCT, RAT, CAQ

Observed behavior

WE

INTERSUBJECTIVE

CAT

KEYS

Situational Outlook Questionnaire

ITS

INTEROBJECTIVE

Global Innovation Index

Global Creativity Index

TAKEAWAYS

1. Creativity = skills + processes + motivation, inside an environment that can help or harm.
2. Intrinsic motivation and meaningful progress matter more than pressure.
3. Indexes are useful maps, but ask what they miss: informal, local, culturally specific creativity.
4. ESM turns “how creative was my week?” into data you can analyze.

TAKE-HOME AND NEXT STEPS

- 7-day ESM in the ping room: 5 pings a day at random times, plus “Where were you?” and “Who were you with?”, then a 600-word reflection.
- Read: Amabile and Pratt (2016); Hennessey and Amabile (2010).
- Explore: the GII 2026 country profile for a place you care about.
- Questions and discussion.

Questions?

REFERENCES 1 / 2

Amabile, T. M. (1979). Effects of external evaluation on artistic creativity. *Journal of Personality and Social Psychology, 37*(2), 221–233.

Amabile, T. M. (1982). Social psychology of creativity: A consensual assessment technique. *JPSP, 43*(5), 997–1013.

Amabile, T. M. (1983). The social psychology of creativity: A componential conceptualization. *JPSP, 45*(2), 357–376.

Amabile, T. M. (1985). Motivation and creativity: Effects of motivational orientation on creative writers. *JPSP, 48*(2), 393–399.

Amabile, T. M. (1988). A model of creativity and innovation in organizations. *Research in Organizational Behavior, 10*, 123–167.

Amabile, T. M. (1993). Motivational synergy. *Human Resource Management Review, 3*(3), 185–201.

Amabile, T. M. (1996). *Creativity in context: Update to the social psychology of creativity.* Westview Press.

Amabile, T. M., Barsade, S. G., Mueller, J. S., & Staw, B. M. (2005). Affect and creativity at work. *Administrative Science Quarterly, 50*(3), 367–403.

Amabile, T. M., Conti, R., Coon, H., Lazenby, J., & Herron, M. (1996). Assessing the work environment for creativity. *Academy of Management Journal, 39*(5), 1154–1184.

Amabile, T. M., Hadley, C. N., & Kramer, S. J. (2002). Creativity under the gun. *Harvard Business Review, 80*(8), 52–61.

Amabile, T. M., & Kramer, S. J. (2011). *The progress principle.* Harvard Business Review Press.

Amabile, T. M., & Pratt, M. G. (2016). The dynamic componential model of creativity and innovation in organizations. *Research in Organizational Behavior, 36*, 157–183.

REFERENCES 2 / 2

Csikszentmihalyi, M., & Larson, R. (1987). Validity and reliability of the experience-sampling method. *Journal of Nervous and Mental Disease, 175*(9), 526–536.

Florida, R. (2002). *The rise of the creative class.* Basic Books.

Florida, R., Mellander, C., & King, K. (2015). *The global creativity index 2015.* Martin Prosperity Institute.

Glăveanu, V. P. (2013). Rewriting the language of creativity: The Five A's framework. *Review of General Psychology, 17*(1), 69–81.

Hektner, J. M., Schmidt, J. A., & Csikszentmihalyi, M. (2007). *Experience sampling method.* Sage.

Hennessey, B. A., & Amabile, T. M. (2010). Creativity. *Annual Review of Psychology, 61*, 569–598.

Isaksen, S. G., Lauer, K. J., & Ekvall, G. (1999). Situational outlook questionnaire. *Psychological Reports, 85*(2), 665–674.

Nardo, M., Saisana, M., Saltelli, A., Tarantola, S., Hoffmann, A., & Giovannini, E. (2008). *Handbook on constructing composite indicators.* OECD Publishing.

Peck, J. (2005). Struggling with the creative class. *International Journal of Urban and Regional Research, 29*(4), 740–770.

Runco, M. A., & Jaeger, G. J. (2012). The standard definition of creativity. *Creativity Research Journal, 24*(1), 92–96.

Shiffman, S., Stone, A. A., & Hufford, M. R. (2008). Ecological momentary assessment. *Annual Review of Clinical Psychology, 4*(1), 1–32.

World Intellectual Property Organization. (2026). *Global Innovation Index 2026: Powering entrepreneurs at the frontier of science.* WIPO. doi.org/10.34667/tind.60373