

Entrepreneurship – Session 3 (October 21)

How do entrepreneurs recognize opportunities?

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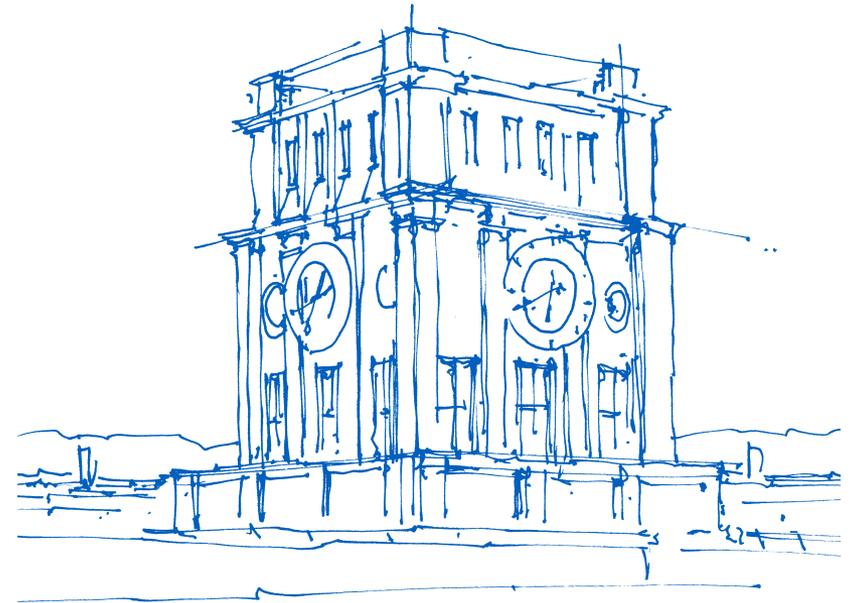
Professorship of Entrepreneurial Behavior

Munich, Winter Semester 2025/2026

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Summary – Session 2

Traits in entrepreneurship

Table 1 Overview of relevant meta-analytic findings^a

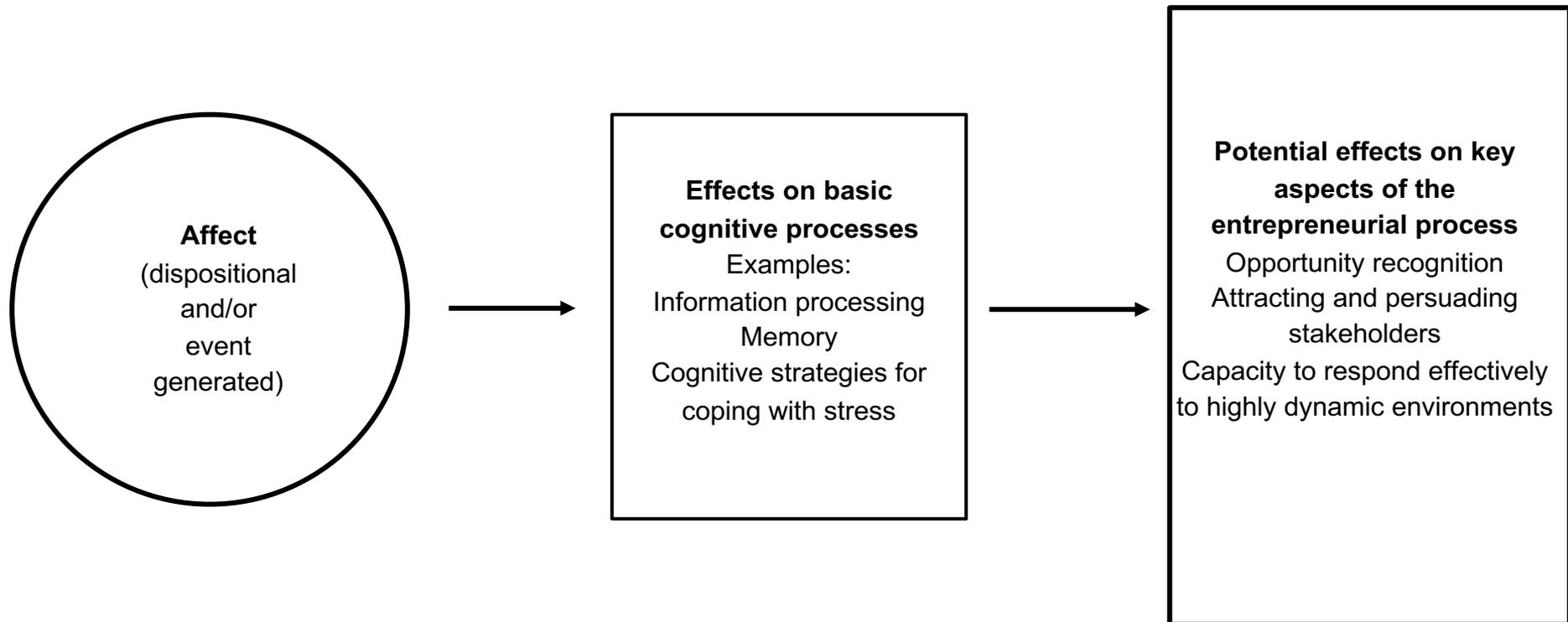
Constructs	Effects on business creation	Effects on business performance
Conscientiousness ^c	Entrepreneurs higher than managers: $r_c = .22$; $K = 20$; $N = 3,480$ (Zhao & Seibert 2006)	$r_c = .19$; $K = 24$; $N = 3,193$ (H. Zhao et al. 2010)
Neuroticism ^c	Entrepreneurs lower than managers: $r_c = -.18$; $K = 14$; $N = 2,305$ (Zhao & Seibert 2006)	$r_c = -.18$; $K = 29$; $N = 4,446$ (H. Zhao et al. 2010)
Openness to experience ^c	Entrepreneurs higher than managers: $r_c = .18$; $K = 10$; $N = 2,115$ (Zhao & Seibert 2006)	$r_c = .21$; $K = 15$; $N = 2,461$ (H. Zhao et al. 2010)
Agreeableness ^c	Entrepreneurs lower than managers: $r_c = -.08$; $K = 7$; $N = 1,350$ (Zhao & Seibert 2006)	Not significant (H. Zhao et al. 2010)
Extraversion ^c	Not significant (Zhao & Seibert 2006)	$r_c = .09$; $K = 9$; $N = 1,476$ (H. Zhao et al. 2010)

Frese & Gielnik (2014)

- Notes:
- K: number of included studies in a meta-analysis
 - N: overall sample size
 - r_c : correlation coefficient indicating the strength and direction of the relationship between two variables; interpretation of sizes in the social sciences (Cohen, 1988): 0.1 = small effect; 0.3 = medium effect; 0.5 = large effect

Summary – Session 2

Affect in entrepreneurship



Based on Baron (2008)

Example – Multiple choice question

What is true about typical motives of entrepreneurs?

- a) Because entrepreneurs have a preference for high standards, they were found to have a high need for achievement.
- b) Because entrepreneurs prefer to set their own goals, they were found to have a low need for achievement.
- c) Because entrepreneurs prefer to set their own goals, they were found to have a low need for autonomy.
- d) Because entrepreneurs have a preference for high standards, they were found to have a high need for autonomy.

Example – Multiple choice question

Which statement is **WRONG** about entrepreneurial passion?

- a) Professional investors tend to prefer entrepreneurs' preparedness compared to their passion.
- b) Entrepreneurs tend to attract stakeholders, such as employees, based on their passion.
- c) Highlighting an entrepreneurs' passion might reduce the feedback that this entrepreneur will receive from stakeholders.
- d) Obsessive passion tends to have positive consequences for entrepreneurial well-being.

Course overview

Slight changes to accommodate for our guest speaker Leonhard Teichert who will help us understand how entrepreneurship can contribute to a better world.

#	DATE	TOPIC
1	Oct 14	Introduction
2	Oct 15	Who is the “entrepreneur”?
3	Oct 21	How do entrepreneurs recognize opportunities?
4	Oct 22	How do entrepreneurs develop opportunities?
5	Oct 28	Guest lecture by Csilla Spiller (Beautechful)
6	Oct 29	How do entrepreneurs structure business opportunities?
7	Nov 04	How do entrepreneurs gain and allocate resources?
8	Nov 05	How do entrepreneurs manage their teams?
9	Nov 11	Putting content into play: Interactive workshop. <i>Please bring a computer. (Session during student assembly, no new content.)</i>
10	Nov 12	Guest lecture by Leonhard Teichert (Circular Republic)
11	Nov 18	Guest lecture by Stefan Schenk (PeterPark)
12	Nov 19	How do entrepreneurs enter their markets and how do they grow their ventures?
13	Nov 25	Guest lecture by Inga vom Holtz (UnternehmerTUM Funding for Innovators)
14	Nov 26	Q & A Session
	Dec 12	Exam

Business opportunities

Entrepreneurs discover, evaluate, and exploit opportunities.

“An opportunity [...] is anchored in a **product or service**, which creates or **adds value** for its buyer or end user” (Hisrich et al., 2005)

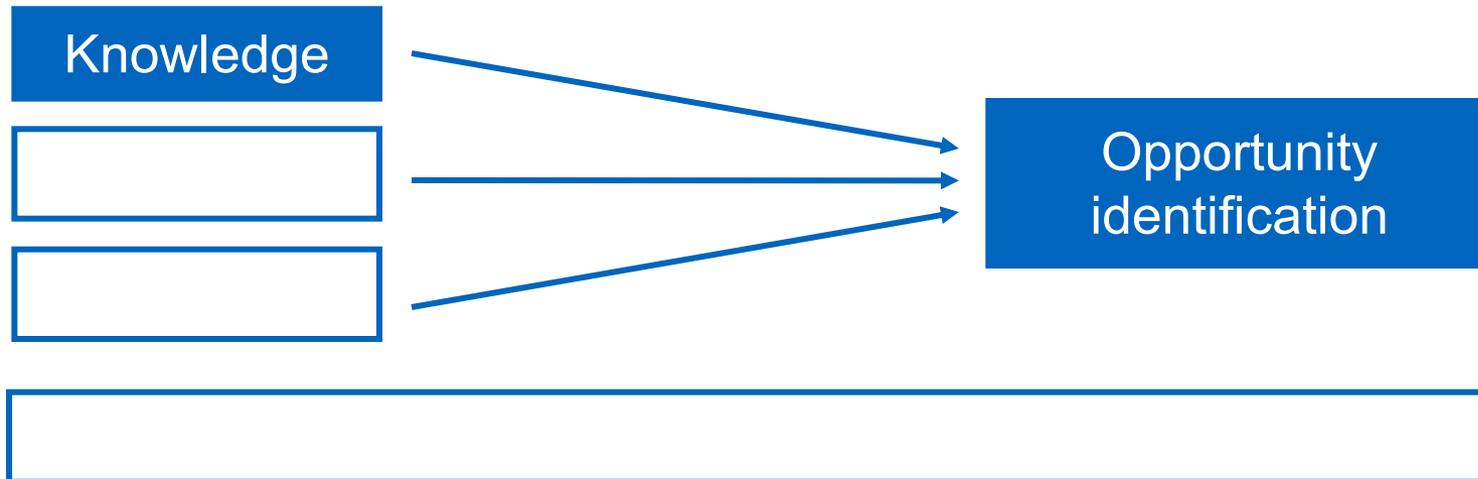


Melanie Perkin's *Canva* Story

What did help her to start Canva?



What factors contribute to opportunity identification?



Based on George et al. (2016)

3-dimensional printing as a versatile technology

- 3DP is a manufacturing technology invented by a team of researchers at MIT in 1989
- 3DP was invented to create parts of any geometry and out of any material such as ceramics, metals, polymers, and composites
- 3DP can be used to produce prototype parts, end-use parts, and tools directly from a computer-aided design (CAD) model



(Shane, 2000)

3D printing process - example 1

Therics

- Use 3DP process to control amount, time and sequence of drug delivery
- Manufacture pills with a superior microstructure through a fully integrated manufacturing process
- More efficient compared to alternative drug manufacturing process



(Shane, 2000)

3D printing process - example 2

Z Corp

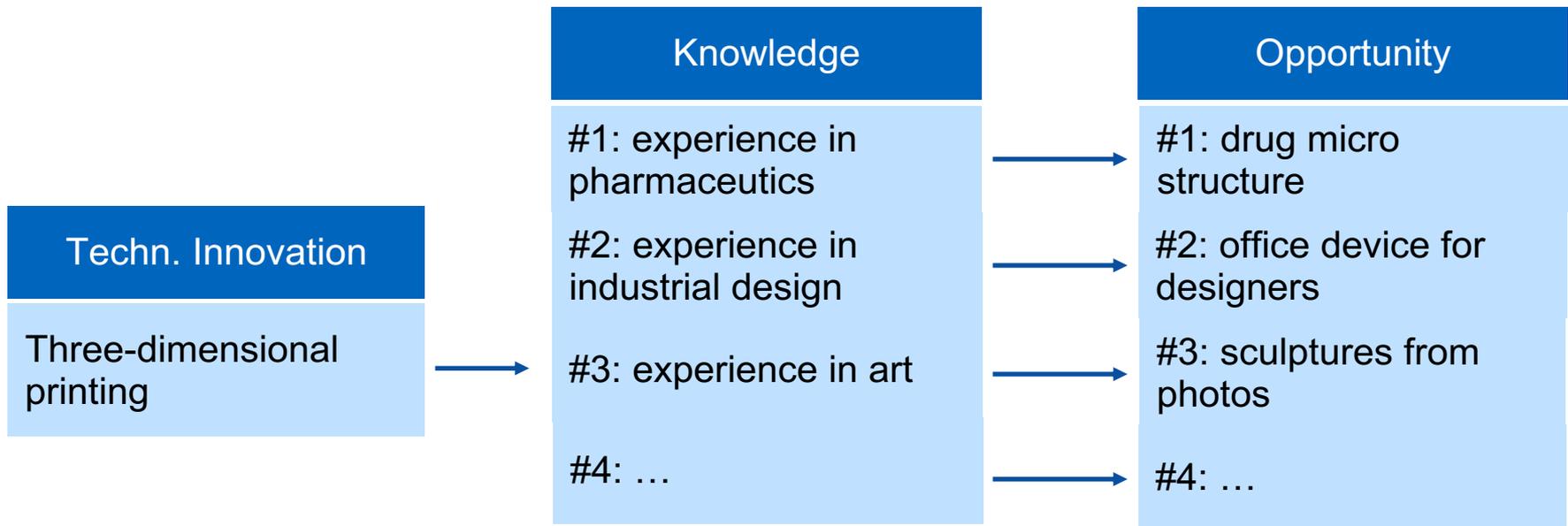
- Manufacture a fast, inexpensive, office compatible machine (Z Corp machine) to make concept models for industrial and architectural design
- Faster and cheaper than existing rapid prototyping processes



(Shane, 2000)

Knowledge & opportunity identification

- Prior experience determines the discovery of a particular opportunity
- Other experience – other opportunities
- No relevant experience – no opportunities



(Shane, 2000; Venkataraman, 1997)

Knowledge & opportunity identification

Individuals are not equally likely to recognize a given entrepreneurial opportunity

People's prior knowledge about markets, customers, and other products influence their discovery of business opportunities



People's prior knowledge determines whether or not they will identify an opportunity!

(Shane, 2000)

A last word on 3D printing

Everybody can use it today as a service to make their own products:

<http://www.youtube.com/watch?v=D3OfjYIXUCU>

You can use different types of 3D printers in our
Entrepreneurship Center in Garching!

<http://www.maker-space.de/>



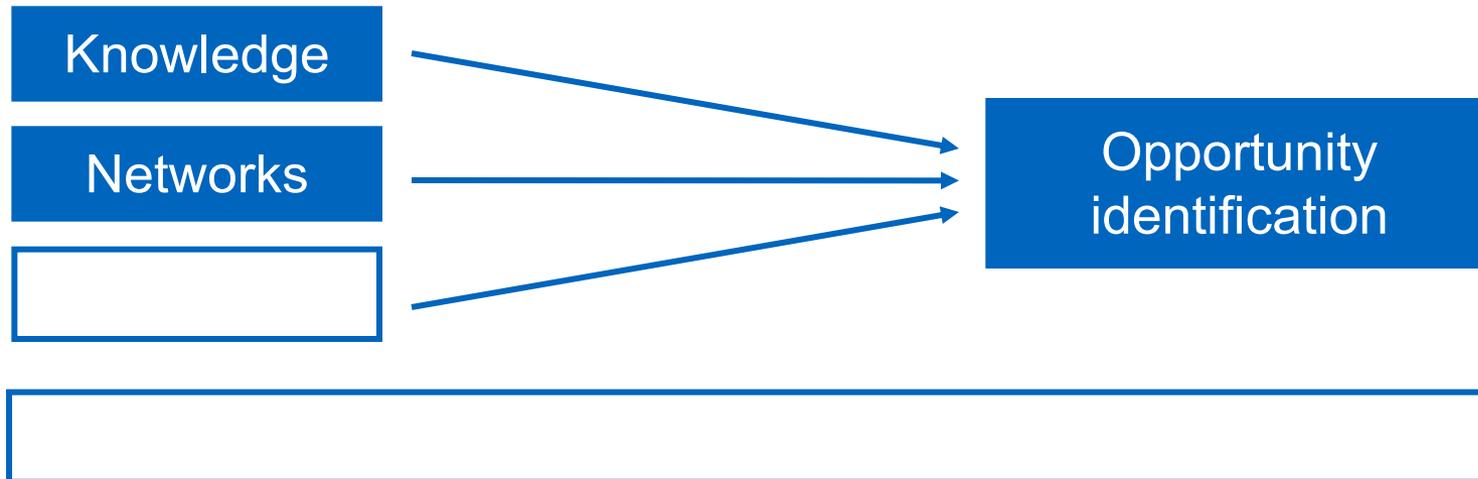
My knowledge

In which domains do I have knowledge? For example, from your studies, jobs, interests, hobbies, clubs, courses in school, etc.

My knowledge

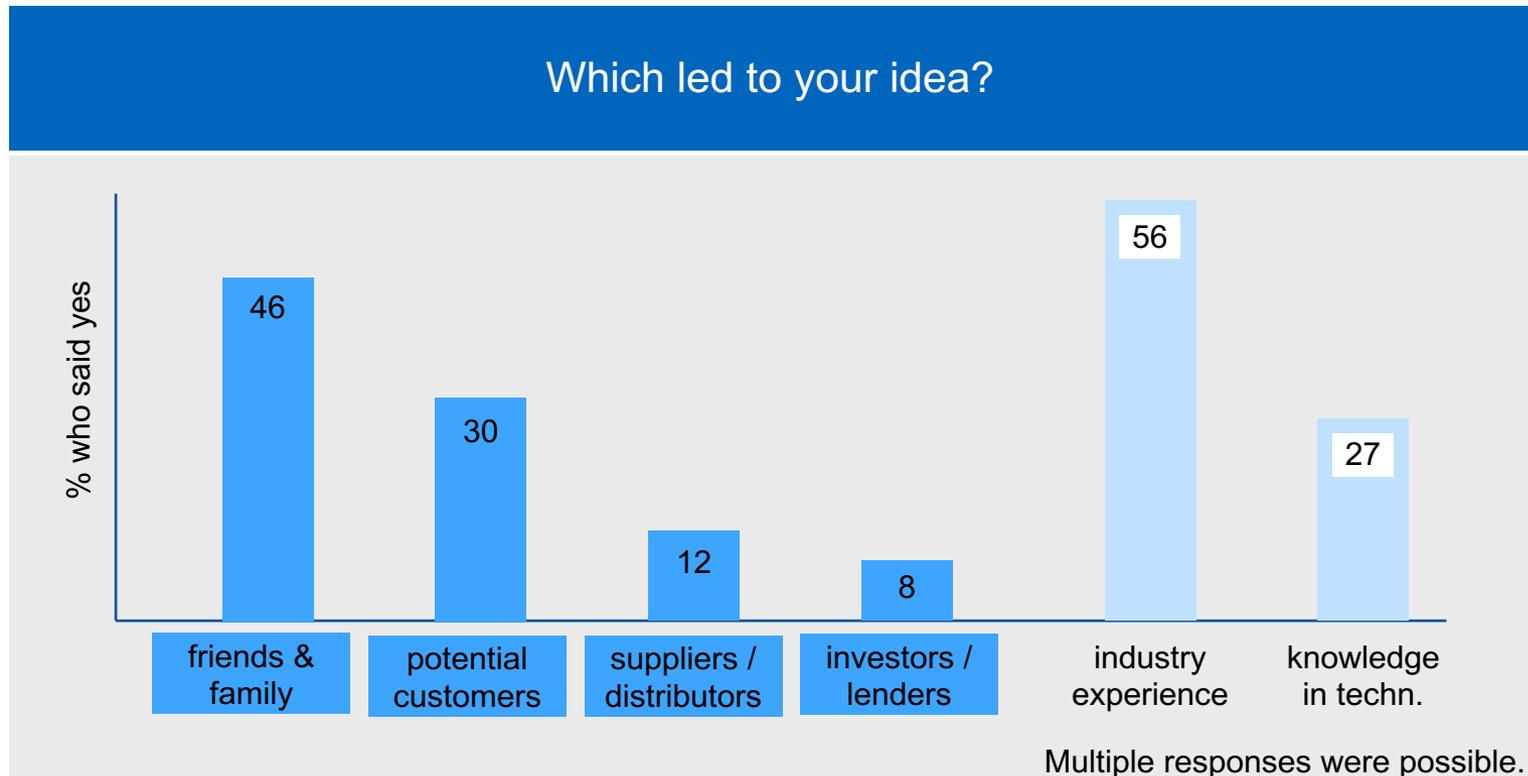
You will benefit most from this exercise if you work with the table on slide 33 directly.

What factors contribute to opportunity identification?



Based on George et al. (2016)

The role of social networks



Hills et al. (2004), based on data from the Panel Study of Entrepreneurial Dynamics (PSED)

The role of social networks



Informational support

Resources: Advice, suggestions, and information to recognize trends

Examples: Mentors; business network members; fellow entrepreneurs; industry contacts; tradeshow



Instrumental support

Resources: Tangible aid, in the form of labor, time, and direct help; money

Examples: Volunteers; family members, in particular spouses; investors



Appraisal support

Resources: Personal feedback, self-evaluation

Examples: Entrepreneurship educators or coaches; fellow entrepreneurs; incubator & accelerator managers



Emotional support

Resources: Encouragement, empathy, care, love, trust

Examples: Family members & friends

Importance of weak ties

(distant, infrequent relationships)

Importance of strong ties

(close, frequent, trust-based relationships)

(Clough et al., 2019; Davidsson & Honig, 2003; House, 1981; Mathias & Wang, 2023)

My social networks

Who do I know? For example, parents, siblings, relatives, friends, colleagues, neighbors, students, professors, etc.

My knowledge	My social networks

Please turn to slide 33
again.

Can knowledge be a burden?

The 18-hour CD

- Sony nearly missed a golden opportunity when they temporarily abandoned work on developing music CDs in the mid-1970s

- Why?

Putting 18 hours of music on a CD was not commercially viable

- But what if...

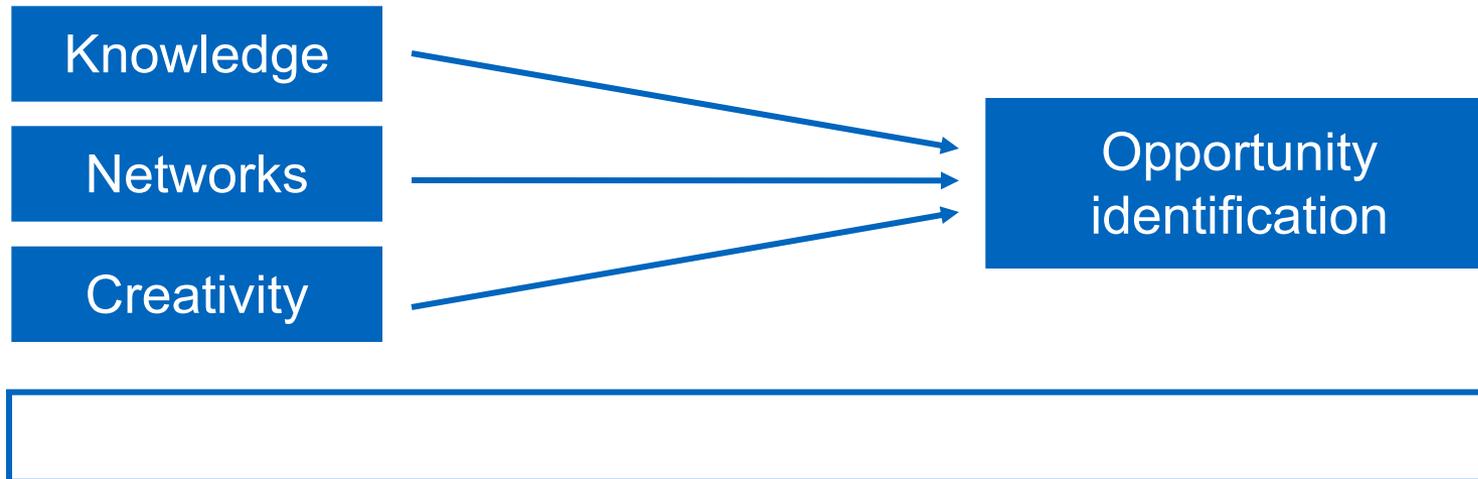
...we could record albums as

⇒ **Knowledge can be restricting in developing opportunities**
Creativity is needed to overcome restrictions



Ward (2004)

What factors contribute to opportunity identification?



Based on George et al. (2016)

What is creativity?

- Definition of creativity: “*The generation of ideas, insights, or problem solutions that are both novel and potentially useful.*” (Baas, et al. 2008)
- Creativity can be *reactive* as it is often a reaction to problems or challenges, however, it can also be *proactive*.
- Creativity involves *convergent* and *divergent* thinking, i.e., logic, previous knowledge, and rationality as well as intuition, gut feeling, and, irrationality.
- Creativity can be trained and elicited with different techniques, e.g.:
 - Conceptual combination
 - Analogical reasoning
 - Checklist method

Techniques of creativity – conceptual combination

Laboratory findings suggest that novel ideas for useful products might be generated by **mentally combining different, previously unrelated concepts.**

- different needs of different customer groups

Examples:



affordable luxury



healthy fast food



glamping

Techniques of creativity – conceptual combination

Choose any two to create your own unique idea/product

Bookshelves

Watch

Sushi

Light bulb

Fish

Train

Flash drive

Armchair

Techniques of creativity – Analogical reasoning

“Applying the knowledge from one domain as a kind of model to help in understanding or developing ideas in another domain” (Ward, 2004, p. 180)

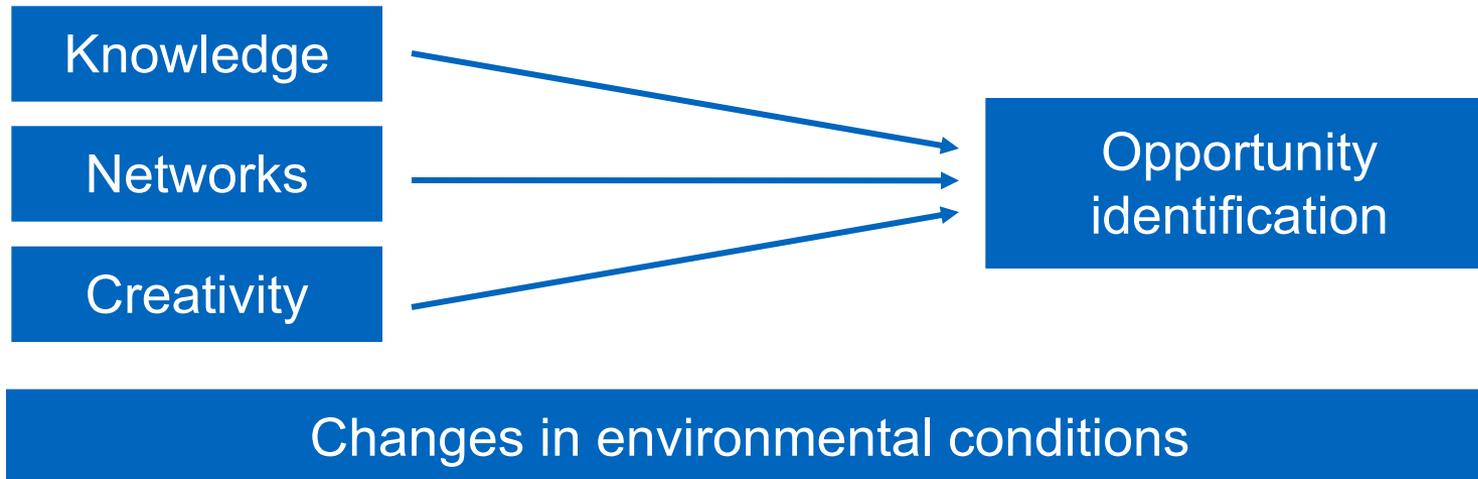
Let's take a look at nature:



Techniques of creativity – Checklist method

- Put to other uses? New ways to use as is? Other uses if modified?
- Adapt? What else is like this? What other ideas does this suggest? What could I copy?
- Modify? New twist? Change meaning, color, motion, odor, form, shape?
- Magnify? What to add? Greater frequency? Stronger? Larger? Thicker? Exaggerate?
- Minify? What substitute? Smaller? Condensed? Lower? Shorter? Lighter?
- Substitute? Who else instead? What else instead? Other ingredient? Other material?
- Other process? Other place? Other approach? Other tone of voice? Change schedule?
- Rearrange? Interchange components? Other pattern? Other layout? Other sequence?
- Reverse? Transpose positive and negative? How about opposites? Turn it backward?
- Combine? How about a blend, an alloy, an assortment? Combine units?
- Combine purposes? Combine appeals? Combine ideas?

What factors contribute to opportunity identification?



Based on George et al. (2016)

The sources of opportunities

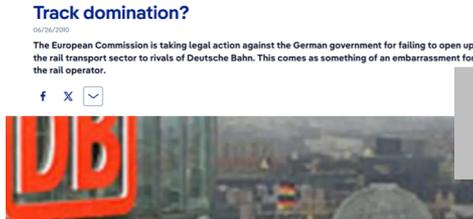
PEST

“Opportunities emerge from a **complex pattern of changing conditions** - changes in political, economic, societal, technological, conditions. **They come into existence at a given point in time** because of a juxtaposition or confluence of conditions which did not exist previously but is now present.” (Baron, 2006)



PEST and opportunities

Political



Liberalization of long-distance traveling Germany

FLIX

Economic



Shifts in labor economics

 **zoom**

Societal



Aging populations in many societies



Technological



Rise of AI

 **OneTutor**

Sources of opportunities



Be aware of and learn more about political, economic, social, and technological changes.



Anticipate what consequences these changes will have.



Think of potential business opportunities.

Sources of opportunities

Look for changes in the environment. For example, technological inventions, demographic change, trends / changes in social values, laws, etc.

My knowledge	My social networks	Changes in PEST conditions

Opportunities for you

Connect the three aspects and use your creativity to generate business ideas by combining them.

My knowledge	My social networks	Changes in PEST conditions	Idea?

References from the class

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