Metacognitive Training (MCT)

MCT 2 B – Jumping to Conclusions I

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Jumping to Conclusions

- We often make snap judgments on the basis of very complex information in our environment.
Jumping to Conclusions

• We often make snap judgments on the basis of very complex information in our environment.

• Sometimes, we come to a conclusion without 100% proof.
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• A happy medium should be found between:
Jumping to Conclusions

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• Sometimes, we come to a conclusion without 100% proof.

• A happy medium should be found between:
  • making a hasty decision (risk: poor decision)  

  and
Jumping to Conclusions

• We often make snap judgments on the basis of very complex information in our environment.

• Sometimes, we come to a conclusion without 100% proof.

• A happy medium should be found between:
  • making a hasty decision (risk: poor decision)
  and
  • being overly accurate (disadvantage: takes too much time).
## Inferences without 100% proof

<table>
<thead>
<tr>
<th>Event</th>
<th>Explanation</th>
<th>justified?</th>
</tr>
</thead>
<tbody>
<tr>
<td>small fluttering object in the morning sky</td>
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<td>could be – but there are a number of other explanations (e.g. cat in the bushes, wind) – consider that actions like throwing a stone may have negative consequences (e.g. injuring your neighbor’s pet).</td>
</tr>
</tbody>
</table>
## Jumping to conclusions “in action”

<table>
<thead>
<tr>
<th>domain</th>
<th>example</th>
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<td>In 1938 the radio-broadcast <em>War of the Worlds</em>, by Orson Welles, caused a mass panic in New York, since many listeners believed</td>
</tr>
<tr>
<td></td>
<td>that the earth really was being attacked by aliens.</td>
</tr>
<tr>
<td></td>
<td><strong>False assumption</strong>: what’s on the radio must be real!</td>
</tr>
</tbody>
</table>
Are there any clues on the US $1 bill to suggest an infiltration of the USA by secret societies?

– Urban legends –

(for an alternative exercise, see end of presentation)
Premature reasoning in action
Are there any clues on the US $1 bill to suggest an infiltration of the USA by secret societies?

<table>
<thead>
<tr>
<th>For</th>
<th>“Evidence”</th>
</tr>
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<tr>
<td>• Figure 1: On the back, different symbols are displayed 13 times each (e.g. stripes on the shield, olive leaves, arrows). 13 is sometimes considered a satanic number.</td>
<td><img src="image1" alt="Symbol" /></td>
</tr>
<tr>
<td>• Figure 2: Some people claim that the bill does not actually display George Washington but Adam Weishaupt, the founder of a secret society.</td>
<td><img src="image2" alt="Portrait" /></td>
</tr>
<tr>
<td>• Figure 3: On the upper right, a little owl is hidden, regarded by some as a satanic symbol.</td>
<td><img src="image3" alt="Owl" /></td>
</tr>
<tr>
<td>• Figure 4: The pyramid on the back may represent a Freemasonry symbol.</td>
<td><img src="image4" alt="Pyramid" /></td>
</tr>
</tbody>
</table>
Premature reasoning in action
Are there any clues on the US $1 bill to suggest an infiltration of the USA by secret societies?

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<th>Against</th>
<th>“Evidence”</th>
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<tr>
<td>• Figure 1: Initially there were 13 US-states, hence the number 13!</td>
<td>![Image 1]</td>
</tr>
<tr>
<td>• Figure 2: In contrast to rumors, there are no obvious similarities between Adam Weishaupt and George Washington!</td>
<td>![Image 2]</td>
</tr>
<tr>
<td>• Figure 3: The owl does not have a specific symbolic meaning, sometimes it represents mischief, however, it often stands for wisdom (e.g. the owl is used as a symbol by many publishers).</td>
<td>![Image 3]</td>
</tr>
<tr>
<td>• Figure 4: The triangle represents the all-seeing eye of God in Christianity (the picture is an image of part of a stained glass window in a Christian church).</td>
<td>![Image 4]</td>
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Premature reasoning
– Urban legends –

Are there any clues on the US $1 bill that suggest an infiltration of the USA by secret societies?

No
How did this urban legend and other conspiracy theories arise?
How did this urban legend and other conspiracy theories arise?

- They are often more exciting than reality!
- They are based on statements that are difficult to check or prove (e.g. that Washington looks like Weishaupt).
- They conceal alternative explanations (e.g. that the repetitive use of 13 symbols is related to the 13 original states).
- Legends are sometimes based on facts taken out of context. The significance of these details is also largely exaggerated (Washington was a freemason, however, that does not mean that the USA were infiltrated or still are).
- Freemasons and other confederacies can raise suspicion because they act secretly.
- But: Contrary to common belief the freemasons do not believe in satan but in a ‘higher being’ (e.g. God, Allah ...). They pursue liberal ideas, but they are not ‘rebellious’.
How did this urban legend and other conspiracy theories arise?

- There are numerous examples in history where minorities and outcasts were falsely blamed for uncontrollable, catastrophic events. For example, in medieval times a poor harvest was often blamed on witchcraft or religious minorities.

- These simple explanations reduced tension and fear and provided the illusion of control.
Why are we doing this?

- Studies show that many people with psychosis (but not all!) make decisions on the basis of little information.
Why are we doing this?

- Studies show that many people with psychosis (but not all!) make decisions on the basis of little information.
- This style of decision making can easily lead to errors. Therefore, it is better to use a decision-making style that takes into account all available information.
How jumping to conclusion promotes misinterpretations during psychosis – examples

<table>
<thead>
<tr>
<th>Event</th>
<th>Explanation during psychosis</th>
<th>Other explanations</th>
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<tr>
<td>Your body aches after your first night in hospital.</td>
<td>You must have been kidnapped overnight and had your organs removed; another patient harmed you during the night; voodoo.</td>
<td>Uncomfortable bed, tension; it is common to have an uncomfortable night when in a new environment; might be a pinched nerve.</td>
</tr>
<tr>
<td>After outpatient surgery, you are prescribed Heparin injections.</td>
<td>Doctors are planning to murder you with toxic injections.</td>
<td>Standard thrombosis prophylaxis.</td>
</tr>
<tr>
<td>On the way to a friend’s, you have to stop three times at red traffic lights.</td>
<td>Evidence that you are in danger – someone wants to harm you.</td>
<td>Pure coincidence (when you are in a hurry you are more prone to notice red lights).</td>
</tr>
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Can anyone contribute a short personal experience?
Task (1)

In the following you will see a series of pictures. It starts with only one detail of the picture. Then, another detail is added. This continues until the whole picture is revealed.

• Your task is to identify the object.
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In the following you will see a series of pictures. It starts with only one detail of the picture. Then, another detail is added. This continues until the whole picture is revealed.

- Your task is to identify the object.
- Try to avoid hasty as well as prolonged decision-making.
Task (1)

In the following you will see a series of pictures. It starts with only one detail of the picture. Then, another detail is added. This continues until the whole picture is revealed.

- Your task is to identify the object.
- Try to avoid hasty as well as prolonged decision-making.
- Discuss evidence for and against each alternative.
Several alternative interpretations are provided.

Please discuss with the group how likely you find each option and whether you feel confident enough to make a decision.
What might be presented in this picture?

- bridge
- raft
- rails
- flagpole
- pile of wood
- paintbrush

How confident are you?
Do you want to make a decision yet?
What might be presented in this picture?

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How confident are you?

Do you want to make a decision yet?
Picture 2

Here, no answer alternatives are provided. You have to come up with your own ideas about the picture. Feel free to offer several alternatives. Please discuss your evaluations in your group!
What might be presented in this picture?

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Picture 3
What might be presented in this picture?

- pear
- woman
- guitar
- violin case
- keyhole
- owl
- tongue
- light bulb
- footsteps

How confident are you?

Do you want to make a decision yet?
What might be presented in this picture?

- pear
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How confident are you?

Do you want to make a decision yet?
Picture 4
What might be presented in this picture?

- goblet
- woman with plunging neckline
- oil lamp
- tent
- carriage
- coat of arms
- magic lamp
- tea pot
- spade

How confident are you?

Do you want to make a decision yet?
What might be presented in this picture?

- goblet
- woman with plunging neckline
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- carriage
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How confident are you?

Do you want to make a decision yet?
Optional: Videoclip

Video clip presentations that address today’s topic are available at the following web site:
http://www.uke.de/mct_videos

After the video, you may discuss how it is related to today’s topic.

[for trainers:]
Some movie clips contain language that may not be appropriate for all audiences and across all cultures. Please carefully pre-screen videos before showing]
Picture 5
What might be presented in this picture?

How confident are you?

Do you want to make a decision yet?
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How confident are you?

Do you want to make a decision yet?
Picture 6
What might be presented in this picture?

- potato
- sun
- fish
- cockroach
- TV aerial
- fat man
- UFO
- spider
- tree

How confident are you?

Do you want to make a decision yet?
What might be presented in this picture?

- potato
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How confident are you?

Do you want to make a decision yet?
Picture 7
What might be presented in this picture?

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What might be presented in this picture?

How confident are you?
Do you want to make a decision yet?
Task 2:
What do you see?
What do you see now?
Hasty decisions do not always lead to errors but sometimes tell only half the story!
Hasty decisions do not always lead to errors but sometimes tell only half the story!

Try to discover all the details/figures in the following pictures!
Woman or saxophone player?
Face or rider?
Jesus or crucifixion?
Madonna or harp-playing fairy?
Transfer to everyday life

Learning objectives:

• The last slides demonstrate that quick decisions can lead to mistakes and often only “half the truth” is recognized.
Transfer to everyday life

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• The last slides demonstrate that quick decisions can lead to mistakes and often only “half the truth” is recognized.

• Therefore look for as much information as possible and exchange views with others, especially if decisions are crucial or have dramatic implications (e.g. feeling that your neighbor is chasing after you → don’t attack the assumed enemies!).
Transfer to everyday life

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• The last slides demonstrate that quick decisions can lead to mistakes and often only “half the truth” is recognized.

• **Therefore look for as much information as possible** and exchange views with others, especially if decisions are crucial or have dramatic implications (e.g. feeling that your neighbor is chasing after you → don’t attack the assumed enemies!).

• For events of minor importance, we may as well decide quickly (e.g. choosing a yogurt brand or sort of cake, picking lottery numbers).
Transfer to everyday life

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• To err is human – be prepared for the possibility that you are wrong.
Transfer to everyday life

Learning objectives:

- The last slides demonstrate that quick decisions can lead to mistakes and often only “half the truth” is recognized.

- Therefore look for as much information as possible and exchange views with others, especially if decisions are crucial or have dramatic implications (e.g. feeling that your neighbor is chasing after you → don’t attack the assumedenemies!).

- For events of minor importance, we may as well decide quickly (e.g. choosing a yogurt brand or sort of cake, picking lottery numbers).

- To err is human – be prepared for the possibility that you are wrong.

- Base important decisions on solid facts. Mere guesses are “bad advisers.” Always consider the consequences of a wrong judgment.
What does this have to do with psychosis?

Many (but not all!) people with psychosis tend to jump to conclusions and to form extreme opinions.
What does this have to do with psychosis?

Many (but not all!) people with psychosis tend to jump to conclusions and to form extreme opinions.

**Example:** Frank accuses his roommate Bertram of trying to poison him!

**Background:** Food tastes peculiar. They do not like each other.

**But:** How could Bertram know which meal Frank would take from the trolley? Hardly anyone commits a murder only because of antipathy or minor disagreement.
What does this have to do with psychosis?

Many (but not all!) people with psychosis tend to jump to conclusions and to form extreme opinions.

Example: Frank accuses his roommate Bertram of trying to poison him!

Background: Food tastes peculiar. They do not like each other.

But: How could Bertram know which meal Frank would take from the trolley? Hardly anyone commits a murder only because of antipathy or minor disagreement.

Many pieces of information should be considered. Discuss a variety of explanations and opinions with people you trust.
Thank you for your attention!

for trainers:
Please hand out worksheets. Introduce our app COGITO (download free of charge).

www.uke.de/mct_app
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<table>
<thead>
<tr>
<th>Name Photographer/Artist</th>
<th>Source/Quelle</th>
<th>Picture Name/Name des Bildes</th>
<th>Description/Kurzbeschreibung</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jonathan Lehrfeld</td>
<td>flickr</td>
<td>War of the Worlds</td>
<td>Newspaper/Zeitung</td>
</tr>
<tr>
<td>Ruth Klinge</td>
<td>- - -</td>
<td>Dollar</td>
<td>One dollar/Ein Dollar</td>
</tr>
<tr>
<td>Stephan Walter</td>
<td>Wikipedia</td>
<td>Adam Weishaupt</td>
<td>Adam Weishaupt</td>
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<td>dbking</td>
<td>flickr</td>
<td>National League of American Pen Women</td>
<td>Label of a publishing company (owl)/Verlagsschild (Eule)</td>
</tr>
<tr>
<td>cobalt123</td>
<td>flickr</td>
<td>Stained Glass Panel, Eye-Catcher</td>
<td>Stained church window/Buntes Kirchenfenster</td>
</tr>
<tr>
<td>Arbeitsgruppe Neuropsychologie</td>
<td>- - -</td>
<td>Black &amp; white drawings of fragmented pictures / Schwarz-weiß Zeichnungen fragmentierter Bilder</td>
<td>Various motives: raft, frog etc./Verschiedene Motive: Floß, Frosch etc.</td>
</tr>
<tr>
<td>Octavio Ocampo</td>
<td>rockypointcollectibles</td>
<td>Different pictures/Verschiedene Bilder</td>
<td>PP by rockypointcollectibles</td>
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## Jumping to conclusions “in action”

– Urban legends –

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<td>Arguments Pro?</td>
<td>![Moon landing photo]</td>
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| Allegedly the moon landing in 1969 never took place and was merely a fake. | Alleged motives of the USA:  
1. “Technological victory” in space travel competition with the Soviet Union, which had successfully launched a satellite into space earlier  
2. Distraction from the Vietnam-War  
3. NASA itself faked the moon landing for fear of governmental budget cutback | ![Moon Landing](image) |
Jumping to conclusions “in action”
– Urban legends –

<table>
<thead>
<tr>
<th>Legend</th>
<th>For and Against</th>
<th>“Evidence”</th>
</tr>
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<tbody>
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<td>Allegedly the moon landing in 1969 never took place and was merely a fake.</td>
<td>For: ???</td>
<td><img src="image.png" alt="Moon landing" /></td>
</tr>
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### Jumping to conclusions “in action”
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| Allegedly the moon landing in 1969 never took place and was merely a fake. | **For:**  
1. “Waving flag”: impossible because there is no atmosphere/weather on the moon  
2. Pictures of starless sky and varying shadows indicate a film studio production  
3. Astronaut Armstrong’s radio message: He responds too quickly to president Nixon’s last sentence. Radio signals need more time to be transmitted to earth than it took Armstrong to answer | ![Image of moon landing](image) |
Jumping to conclusions “in action”
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### Jumping to conclusions “in action”

- **Urban legends** –

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| Allegedly the moon landing in 1969 never took place and was merely a fake. | **Against:**  
1. The waving of the flag was caused by ramming the pole into the moon’s surface and a supporting mounted crossbar  
2. Night photographies cannot capture weak light sources due to exposure times → no stars  
3. The varying shadows were caused by the uneven moon surface  
4. The interview had been edited in order to cover the original time delay between Nixon’s and Armstrong’s dialog | ![Moon Landing](image-url) |
Was the moon landing faked by the US Government?  

No!

Director Roland Emmerich (Independence Day):  
“The moon landing (...) was just too good. Such a thing was impossible to stage in the 1960s. Even with today’s equipment this would pose problems.”

Source: German television station ZDF: „Vorsicht Verschwörung“ (Beware conspiracy)
How did this urban legend and other conspiracy theories arise?
How did this urban legend and other conspiracy theories arise?

- They are often more compelling than reality.
- They are based on facts that are hard to check and people believe them easily (e.g., waving flag suggests that pictures were taken on earth).
- They conceal alternative explanations (e.g., the starless sky can be explained by the technical limitations of night photography).
- Urban legends take facts out of context and push them to the limit.