We often make snap judgments on the basis of very complex information in our environment.
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Sometimes, we come to a conclusion without 100% proof.
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:
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
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>Smoke is coming out of a window</td>
<td>fire?</td>
<td>??? – What would you do?</td>
</tr>
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<td>probably – saying: “No smoke without a fire!”</td>
</tr>
<tr>
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<td></td>
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</tr>
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<td>drunk?</td>
<td>could be – but there are a number of other explanations (e.g. dementia, stroke). If you don’t consider other explanations, you may insult him (e.g. showing disgust).</td>
</tr>
</tbody>
</table>
## Jumping to conclusions “in action”

<table>
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<tr>
<th>domain</th>
<th>example</th>
</tr>
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<td>???</td>
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<tr>
<td>medicine</td>
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The police killed an innocent Brazilian man by mistake shortly after the bombing (misleading cues: dark skin, backpack, he fled from the police).  
March 11th, 2004 bombings in Madrid  
At first, the Spanish government was wrongly convinced that the local terror group ETA was behind the attacks (misleading cue: ETA had previously committed bombings). |
| medicine | ??? |
### Jumping to conclusions “in action”

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At first, the Spanish government was wrongly convinced that the local terror group ETA was behind the attacks (misleading cue: ETA had previously committed bombings). |
| medicine | Single symptom -> diagnosis?  
A single seizure is sometimes mistaken as epilepsy (seizures can also occur after alcohol withdrawal and high fever).  
On the other hand, some diagnoses are overlooked because an in depth diagnostic evaluation is not carried out (e.g. cancer). |
## Jumping to conclusions “in action”
- Urban legends -
[for an alternative exercise see end of presentation]

<table>
<thead>
<tr>
<th>Legend</th>
<th>For &amp; Against</th>
<th>“Evidence”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul McCartney (Beatles) died in 1966 in an accident and was replaced by a double</td>
<td><strong>For: ???</strong></td>
<td><img src="https://via.placeholder.com/150" alt="Image" /></td>
</tr>
<tr>
<td></td>
<td><strong>Against: ???</strong></td>
<td></td>
</tr>
</tbody>
</table>
Legend
Paul McCartney (Beatles) died in 1966 in an accident and was replaced by a double

For & Against
**For:** allegedly over 70 hidden clues, some on the “Abbey Road-Cover” (on the right):
- Paul is barefoot and deathly pale.
- Paul is left-handed, but is holding his cigarette with his right hand!
- Licence plate “LMW” (see arrow): “Linda McCartney Weeping”.
- Also, his bass playing is said to have changed since 1966.

**Against:** ???

“Evidence”
## Legend

Paul McCartney (Beatles) died in 1966 in an accident and was replaced by a double

## For & Against

**For:** allegedly over 70 hidden clues, some on the “Abbey Road-Cover” (on the right):
- Paul is barefoot and deathly pale.
- Paul is left-handed, but is holding his cigarette with his right hand!
- Licence plate “LMW” (see arrow): “Linda McCartney Weeping”.
- Also, his bass playing is said to have changed since 1966.

**Against:**
- Same appearance and voice.
- Evidence seems made up, LMW could mean anything.
- Origin: legend emerged in 1969 from a well directed newspaper hoax.

## “Evidence”
Was Paul McCartney replaced by a double?

McCartney’s humorous response to the rumours relating to his death: a solo album with the title “Paul is live”. Note, the cover is similar to the Abbey road cover shown before.

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 the bass playing style of Paul McCartney had changed).
- They conceal alternative explanations (e.g. that LMW can mean anything).
- Legends are sometimes based on facts that are taken out of context. The significance of these details is also largely exaggerated (McCartney really is left-handed, however, that does not exclude the possibility of holding a cigarette in his right hand, e.g. because the photographer asked him to).
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.
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>
</tr>
</thead>
<tbody>
<tr>
<td>You hear a crackling noise on the phone line.</td>
<td>The CIA is eavesdropping on you.</td>
<td>Wire damage; typical sounds of a distant call; dead spot during cell phone call.</td>
</tr>
<tr>
<td>White dust on the kitchen table, wasn't there before.</td>
<td>An attempt to poison you with anthrax has been made; the police planted drugs to frame you.</td>
<td>Someone has just been baking; no one has dusted for a while.</td>
</tr>
</tbody>
</table>

Can anyone contribute a short personal experience?
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.
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.
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.
Picture 1

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?

- smiling face
- bowl
- boat
- sled
- rocking chair
- elephant’s head

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

- smiling face
- bowl
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How confident are you?
Do you want to make a decision yet?
Here, no response 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 with the group.
What might be presented in this picture?

How confident are you?
Do you want to make a decision yet?
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Picture 3
What might be presented in this picture?

How confident are you?
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How confident are you?
Do you want to make a decision yet?
optional: Video Clip

- optional: Video clip presentations that address today’s topic are available at the following website: 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?

- saw
- old bridge
- hedgehog
- tuft of grass
- dragon
- fence
- mountain landscape
- porcupine
- ear

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

How confident are you?
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What might be presented in this picture?

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

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

- rope
- anchor
- necklace with pendant
- snake
- parrot
- spaghetti
- bean stalk
- flower
- highway

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

- rope
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How confident are you?

Do you want to make a decision yet?
Picture 8
What might be presented in this picture?

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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 9
What might be presented in this picture?

- seal
- man in winter clothes
- flower
- river scenery
- mermaid
- octopus
- harp
- mussel
- fish

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

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- octopus
- harp
- mussel
- fish

How confident are you?
Do you want to make a decision yet?
Task 2:
What do you see?
What do you see now?

Old couple, goblet or...?
What do you see?
What do you see?
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!
Old woman, young woman, man with mustache?
Old man or rider?
Duck or rabbit?
What would you see if you turned the picture upside down?
Horse or rider?
Skull or bakery?
What do you see?
Try to discover all details!
Learning objectives:

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

To err is human – be prepared for the possibility that you are wrong.
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 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).
- 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.
Many [but not all!] people with psychosis tend to jump to conclusions and to form extreme opinions.
Many [but not all!] people with psychosis tend to jump to conclusions and to form extreme opinions.

**Example:** While attending a public social event, Carl claims to be the next King of Germany.

**Background:** Carl found a figure of a king with a crown in a surprise egg. But!: He has no royal blood, the monarchy was abolished in Germany long ago; but above all: The content of the surprise egg cannot be considered conclusive evidence!
Many [but not all!] people with psychosis tend to jump to conclusions and to form extreme opinions.

Example: While attending a public social event, Carl claims to be the next King of Germany.

Background: Carl found a figure of a king with a crown in a surprise egg. But!: He has no royal blood, the monarchy was abolished in Germany long ago; but above all: The content of the surprise egg cannot be considered conclusive evidence!

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 (www.uke.de/mct)*
<table>
<thead>
<tr>
<th>Name</th>
<th>Photographer/Artist</th>
<th>Source/Quelle</th>
<th>Picture Name/Name des Bildes</th>
<th>CC = used with corresponding creative commons license; PP = used with personal permission of artist</th>
<th>Description/Kurzbeschreibung</th>
</tr>
</thead>
<tbody>
<tr>
<td>sprinsy</td>
<td>fotograf/Künstler</td>
<td>flickr</td>
<td>cover.beatles</td>
<td>CC</td>
<td>Abbey road</td>
</tr>
<tr>
<td>mharrsch</td>
<td>fotograf/Künstler</td>
<td>flickr</td>
<td>Beatle Paul McCartney 2</td>
<td>CC</td>
<td>The young Paul McCartney</td>
</tr>
<tr>
<td>Alan Light</td>
<td>fotograf/Künstler</td>
<td>flickr</td>
<td>Paul McCartney</td>
<td>CC</td>
<td>The older Paul McCartney</td>
</tr>
<tr>
<td>Arbeitsgruppe Neuropsychologie</td>
<td>- - -</td>
<td>- - -</td>
<td>Black &amp; white drawings of fragmented pictures/Schwarz-weiß Zeichnungen fragmentierter Bilder</td>
<td>Produced for the MCT/Anfertigung für das MKT; © Arbeitsgruppe Neuropsychologie</td>
<td>Various motives: rocking chair, elephant etc./Verschiedene Motive: Schaukelstuhl, Elefant etc.</td>
</tr>
<tr>
<td>- - -</td>
<td>American Journal of Psychology</td>
<td>- - -</td>
<td>Mother, father, and daughter</td>
<td>Copyright 1961 by the Board of Trustees of the University of Illinois. Used with permission of the University of Illinois Press</td>
<td>Old woman, young woman, man with mustache/Alte Frau, junge Frau, Mann mit Schnurrbart</td>
</tr>
<tr>
<td>Jastrow, J.</td>
<td>fotograf/Künstler</td>
<td>Popular Science Monthly, 54, 299-312</td>
<td>The mind’s eye</td>
<td>public domain</td>
<td>rabbit-duck/Hase-Ente</td>
</tr>
<tr>
<td>Octavio Ocampo - Vexierbilder</td>
<td>rockypointcollectibles</td>
<td>- - -</td>
<td>Different pictures/Verschiedene Bilder</td>
<td>PP by rockypointcollectibles</td>
<td>---</td>
</tr>
</tbody>
</table>
### Jumping to conclusions “in action”
- Urban legends -

<table>
<thead>
<tr>
<th>Legend</th>
<th>Conspiracy theorists</th>
<th>“Evidence”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allegedly the moon landing in 1969 never took place and was merely a fake.</td>
<td>Arguments pro?</td>
<td><img src="image.png" alt="Moon Landing Image" /></td>
</tr>
<tr>
<td>Legend</td>
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<tr>
<td>-----------------------------------------------------------------------</td>
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<td>Alleged motives of the USA:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>1. “Technological victory” in space travel competition with the Soviet Union, which had successfully launched a satellite into space earlier</td>
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</tr>
<tr>
<td></td>
<td>2. Distraction from the Vietnam-War</td>
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<tr>
<td></td>
<td>3. NASA itself faked the moon landing for fear of governmental budget cutback</td>
<td></td>
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<td><strong>For: ???</strong></td>
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*Jumping to conclusions “in action” - Urban legends -*
Jumping to conclusions “in action”  
- Urban legends -

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<td><strong>For:</strong></td>
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</tr>
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<td>1. “Waving flag”: impossible because there is no atmosphere/weather on the moon</td>
<td></td>
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<tr>
<td>2. Pictures of starless sky and varying shadows indicate a film studio production</td>
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<td>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</td>
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## Jumping to conclusions “in action”
- Urban legends -

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<td><img src="moon_landing_image.jpg" alt="Moon Landing Evidence" /></td>
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- Urban legends -

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<td></td>
</tr>
<tr>
<td>1.</td>
<td>The waving of the flag was caused by ramming the pole into the moon’s surface and a supporting mounted crossbar</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Night photographies cannot capture weak light sources due to exposure times (\rightarrow) no stars</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>The varying shadows were caused by the uneven moon surface</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>The interview had been edited in order to cover the original time delay between Nixon’s and Armstrong’s dialog</td>
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Allegedly the moon landing in 1969 never took place and was merely a fake.
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.