



# ADVANCED ANALYTIC RIGOUR

**Ashley Barnett & Tamar Primoratz**  
The Hunt Laboratory for Intelligence Research  
The University of Melbourne



October 2020



**Tomi Lahren** ✓  
@TomiLahren



Either masks work or they don't. If you're requiring them because they stop the spread then reopen everything. If they don't work then the mandates are BS. Pick a narrative and stick to it.

9:56 AM · Jun 30, 2020 · [Twitter for iPhone](#)



**Logic: another thing that  
penguins aren't very good at.**

## 6. USES CLEAR AND LOGICAL ARGUMENTATION.

Definition: Analytic products should present a clear main analytic message up front. Products containing multiple judgments should have a main analytic message that is drawn collectively from those judgments. All analytic judgments should be effectively supported by relevant intelligence information and coherent reasoning.

Language and syntax should convey meaning unambiguously. Products should be internally consistent and acknowledge significant supporting and contrary information affecting judgments.

Poor	Fair	Good	Excellent
(1) Lacks a main analytic message; <b>OR</b> (2) Does not support analytic judgments with relevant evidence or undermines them by using flawed logic; <b>OR</b> (3) Often uses unclear language or uses a structure that is not easily understood.	(1) Presents a main analytic message; <b>BUT</b> (2) Does not combine evidence, context, and assumptions effectively to support analytic judgments or uses weak logic; <b>OR</b> (3) Sometimes uses unclear language or a structure that at times is not easily understood.	(1) Presents a prominent and clear main analytic message; <b>AND</b> (2) Presents clear reasoning with no flaws in logic and effectively combines evidence, context, and assumptions to support analytic judgments; <b>AND</b> (3) Uses clear language and a structure that displays a logical flow appropriate for the argument being presented.	Satisfies "good" criteria; <b>AND</b> (1) Addresses any inconsistent or contrary information in a way that reconciles it with analytic judgments; <b>OR</b> (2) Demonstrates notable skill or sophistication in combining evidence, context, and assumptions convincingly to support analytic judgments.



How well does  
reasoning hold up in  
a stress test?



- 1. Review reasoning**
- 2. Identify flaws**
- 3. Assess impact**
- 4. Fix flaws**

## **1. Review reasoning**

- **How is the reasoning supposed to work?**
- **What is its structure? What stratagems is it using?**
- **What needs to happen for it to successfully establish the conclusion?**

## 2. Identify flaws

**For every flaw:**

- **Write down the name of the flaw identified**
- **Describe how it occurs in the reasoning**
- **Describe where it occurs in the reasoning**

### **3. Assess impact**

- **Assess the impact of each flaw on its chain of reasoning**
- **Assess the impact of all flaws combined on the overall support for the conclusion**

## 4. Fixing flaws

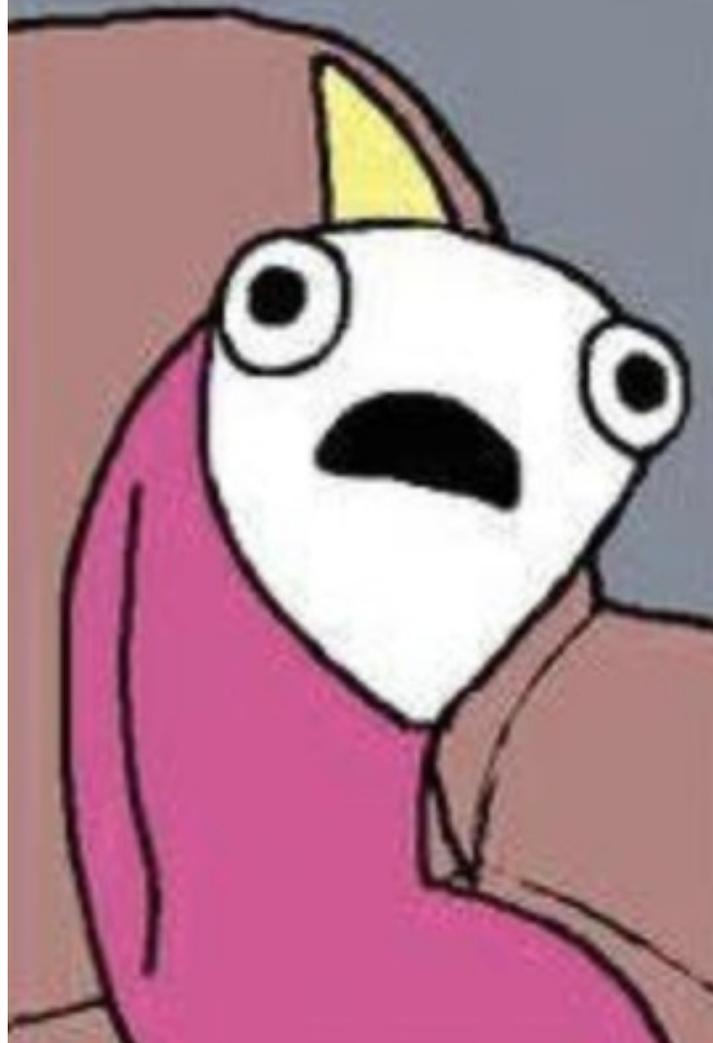
- **Determine whether the reasoning can be fixed given the flaws identified**
  - **If so: should the body of the text or the conclusion be changed?**
- **If possible, explain how the reasoning can be fixed**
- **If not, make recommendations for the author on what needs to happen ahead of fixing it.**

Questions?

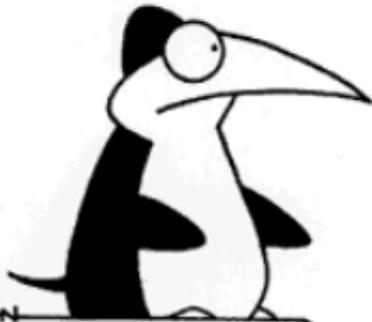
A reasoning flaw is:

Any kind of issue that reduces the support for the conclusion in the reasoning.

??



PENGUINS ARE BLACK AND WHITE.  
SOME OLD TV SHOWS ARE BLACK AND WHITE.  
THEREFORE, SOME PENGUINS ARE OLD TV SHOWS.



GLASBERGEN

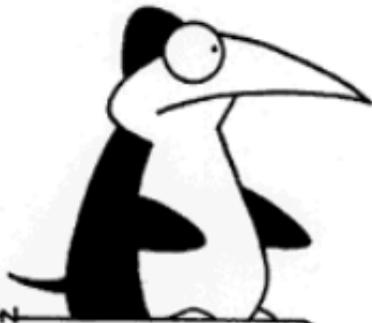
**Logic: another thing that  
penguins aren't very good at.**

Some penguins are  
old TV shows.

Penguins are black  
and white.

Some old TV  
shows are black  
and white.

PENGUINS ARE BLACK AND WHITE.  
SOME OLD TV SHOWS ARE BLACK AND WHITE.  
THEREFORE, SOME PENGUINS ARE OLD TV SHOWS.



GLASBERGEN

**Logic: another thing that  
penguins aren't very good at.**

Some penguins are  
old TV shows.

Penguins are black  
and white.

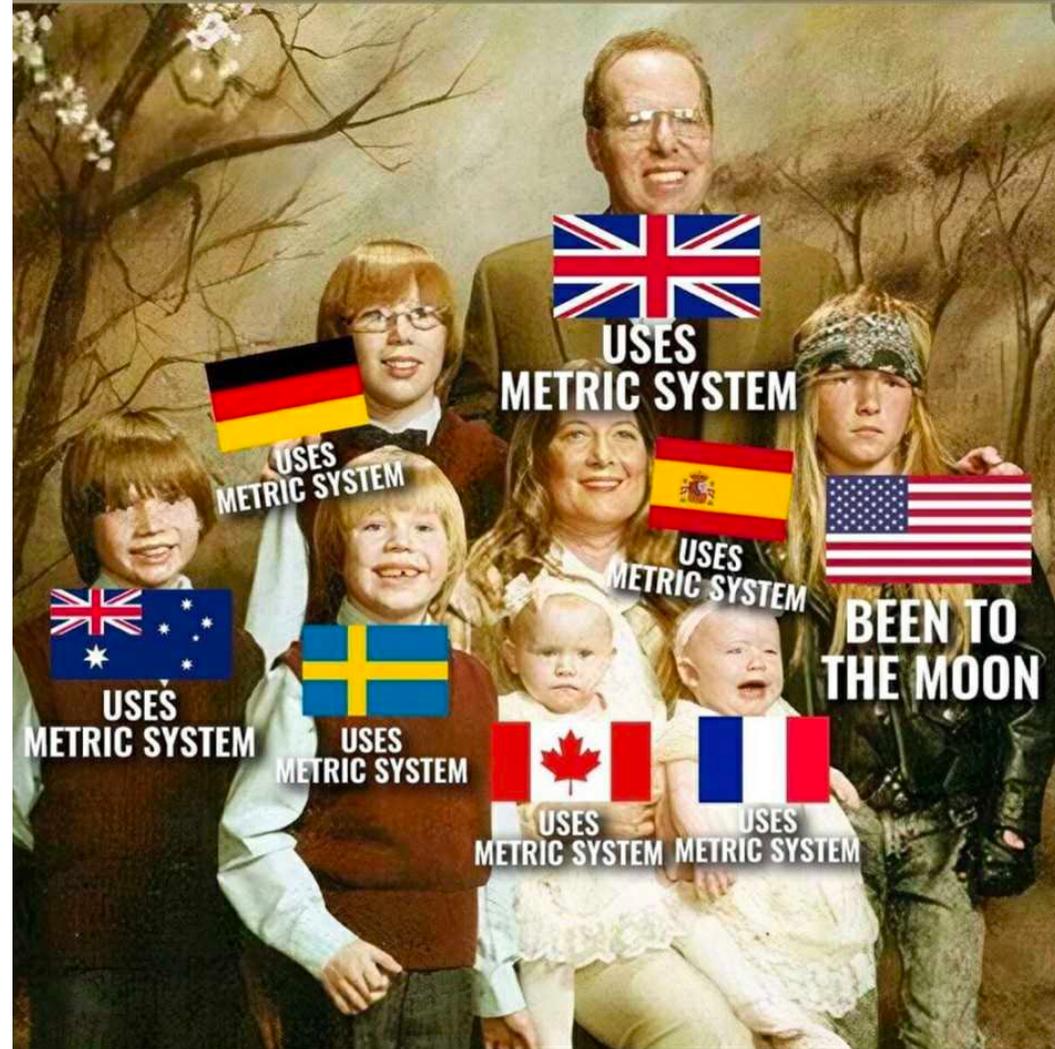
Some old TV  
shows are black  
and white.

[If two groups of  
things share a  
feature then some  
things with the  
feature will belong  
to both groups.]

The number of vehicle thefts via assault offences ('carjackings') in Australia have increased in the last 12 months by approximately 25% compared to the previous year. We analysed newspaper reports of carjackings and found that the vast majority of carjackings reported in the press involved weapons. From last month, we found reports of 3 carjackings involving weapons: one involving threats to seriously injure a mother and her three-year-old child by an offender with a concealed weapon; one involving the theft of a rare vehicle taken by two offenders (one with a handgun); and one involving a man being pulled from a vehicle by an unarmed male offender while the victim was stopped at traffic lights. In our assessment, most carjackings involve weapons.

## Taxonomy

# Human logic is also flawed



## Example: James Oberlin



James Mark Oberlin, 34, 180cm, beard, clean-shaven head, tattoos, often seen wearing heavy boots, flannel shirt, blade-style sunglasses. Single. Lives on a small property in the hills NE of the state capital, bordering on a national forest. Self-employed as an orchard and vineyard maintenance contractor. Drives a Toyota Land Cruiser 79 double cab.

After an extensive investigation (Antipodean Federal Police Investigation Report #511248, 2019), we have concluded that it is likely that Oberlin is preparing a terrorist attack, based on the following:

- A check of gun registration records shows that Oberlin has put together an arsenal consisting of a .22 rifle with night scope, and a shotgun.
- Interviews with staff in local businesses reveal that Oberlin regularly purchases petrol in small containers, bags of fertiliser, and nails.
- Covert surveillance has shown Oberlin to be frequently attending activist gatherings under the guise of protesting against wind farm developments.
- Meets on Wednesday evenings and Saturdays with men of a similar age. Other members of the community do not appear to be welcome.
- Known to have obtained political literature through the internet including the right-wing manifesto *Battlelines*.
- Immigration records show unexplained trips to New Zealand prior to the 2019 mosque attacks.

There is no Criminal History match for Oberlin using the identification details provided. Reviews of all available law enforcement databases produce no identifiable records of other engagement with law enforcement (including non-criminal activity), but he may have an extensive record under another identity. At this stage, we have no direct intel on a planned attack, and so further investigation is required and will change the probability of our assessment considerably.

# Example: Civil War in Iraq



For the last six to eight months, Iraq has been involved in what we would describe as a low-level civil war. However, unless US policies there change rapidly, this conflict is likely to escalate into a full-scale civil war. We still have time to take steps that will prevent an all-out civil war, and we would be happy to talk about these later. But we want to concentrate in this talk on why – if such drastic changes in US policies do not occur – we think Iraq is currently on a trajectory towards full-scale civil war. In researching this question, we examined several cases from the recent past in which low-level civil wars have escalated into full-scale civil war, including some which are ongoing. Among the case studies we examined were: Congo/Rwanda, Lebanon, Afghanistan, the former Yugoslavia, Tajikistan, and Angola. Our case studies revealed a number of features in the countries that made the leap from insurgency to full-scale civil war. Not all of our case studies had all of these features; nevertheless these features were common to most of the case studies:

- A lack of well-functioning government institutions.
- A bitter insurgency.
- Foreign intervention.
- Oil wealth.
- Increase in crime, including sectarian killings.
- Government corruption.

Unfortunately, all of these factors, which we observed in countries that had made the transition to full-scale civil war, are also present in Iraq. There is also one large mitigating factor as well, namely a large military force. But it is not at all clear that this one factor can outweigh all the pressures that point toward an escalating civil war in Iraq.

## Example: Disease Outbreak in Philtaria



We are closely monitoring the situation in Philtaria, a small and impoverished country of strategic importance due to its position in the region. For the last month, parts of the country have been afflicted by a mystery illness which medical experts haven't been able to identify (Disease Control Center. Unidentified Disease Outbreak- Philtaria. 2019). We are concerned about the risk of a widespread outbreak. Our investigators, aided by medical experts, have so far identified two pieces of relevant information that suggest two possibilities:

1. The cases of the disease have been more prominent in areas with larger mosquito populations, which could indicate that this is the early stages of a fularia virus outbreak. (Disease Control Center. Unidentified Disease Outbreak- Philtaria. 2019) However, around 50% of patients with the illness display symptoms that are not normally associated with fularia. Therefore we consider this to be a rather low probability hypothesis.
2. 8 medical clinics in Philtaria have started selling vaccines to the pulaeva virus. To date they have sold 8,000 vaccines. The rates of illness amongst the people who have taken the vaccine is lower than the general population: 0.2% compared to 3%. (Disease Control Center. Field Report- Pulaeva Vaccination. 2019). This level of disease reduction is what we would expect if the vaccine is effective for the disease in question, so we consider this to be strongly supportive evidence that the disease is caused by pulaeva virus.

No other known illness fits with the description of the outbreak. Therefore, the mystery illness is likely (55-75%) to be the pulaeva virus.



**ADVANCED  
ANALYTIC RIGOUR**

For more information:  
[barnett.a@unimelb.edu.au](mailto:barnett.a@unimelb.edu.au)  
[tpri@unimelb.edu.au](mailto:tpri@unimelb.edu.au)

