



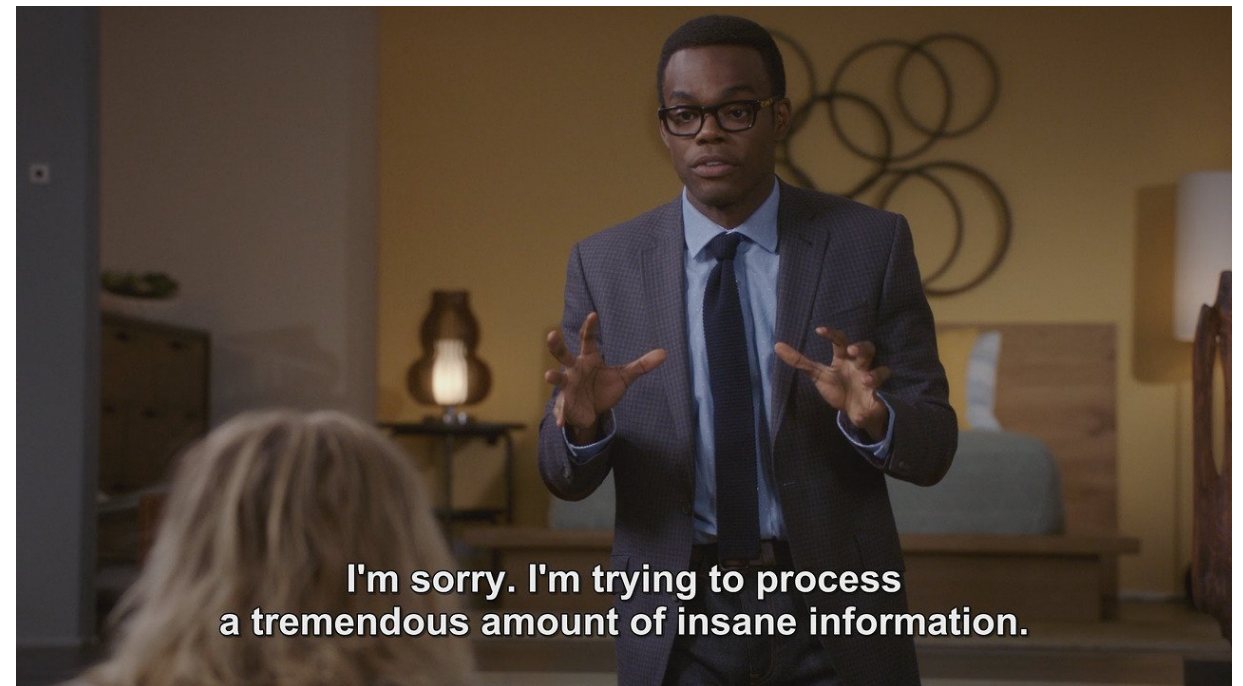
# ADVANCED ANALYTIC RIGOUR

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- **Resources**
- **Practice, application**



- **Open source text – please email your text to us if possible ahead of next session**
- **If you have sent us your argument maps but haven't received them back with comments, please let us know**
- **Send us your imperfect argument maps!**

## 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.

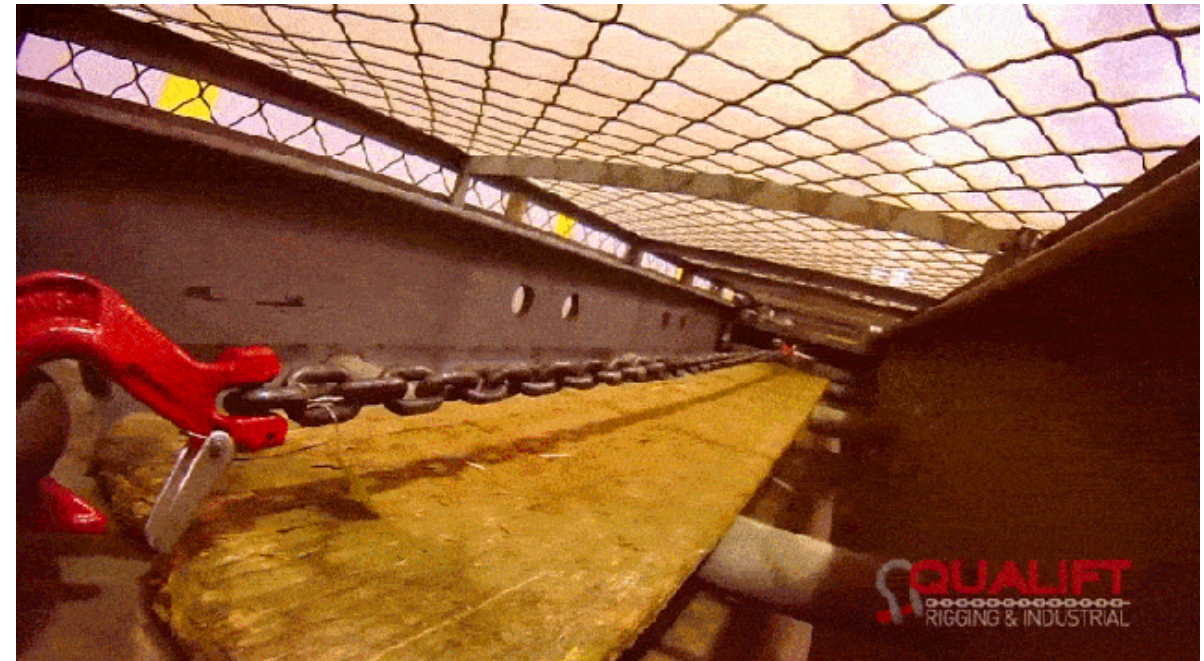
After an extensive investigation (Antipodean Federal Police Investigation Report #511248, 2019), we have concluded that it is likely that Oberlin is preparing a terrorist attack, based on the following:

- 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.



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



How well does reasoning hold up in a stress test?

## **1. Review reasoning**

- How is it supposed to work?
- What is its structure?
- What stratagems is it using?
- What needs to happen for it to succeed?

## **2. Identify flaws**

- Write down the flaw
- Describe how it occurs
- Describe where it occurs

## **3. Assess impact**

- Assess the impact of each flaw on its chain of reasoning
- Assess the impact of all flaws combined

## **4. Fixing flaws**

- Can the reasoning can be fixed?
- Explain how it can be fixed, OR
- Make recommendations to the author

A reasoning flaw is:

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

# Taxonomy





Questions?

The world trade centre buildings were not destroyed by terrorists who crashed their planes into the towers as is commonly believed. Basic physics shows that the buildings would not have collapsed like they did just from planes crashing into them. We know this because jet fuel cannot completely melt steel beams like those used to support the world trade centre. Jet fuels burns at around 815 degrees Celsius, whereas steel's melting point is around 1,510 degrees. Therefore, the steel beams couldn't have melted, and thus a plane crash couldn't have caused the towers to collapse.

“...the second half of the 20th century was mostly a victory for the low-tax side. Companies found ways to take more deductions and dodge taxes. Politicians cut every tax that fell heavily on the wealthy: high-end income taxes, investment taxes, the estate tax and the corporate tax. The justification for doing so was usually that the economy as a whole would benefit. The justification turned out to be wrong. The wealthy, and only the wealthy, have done fantastically well over the last several decades. GDP growth has been disappointing, and middle-class income growth even worse.”

(from the *New York Times*)

# Exercise: 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.



## Exercise: 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:

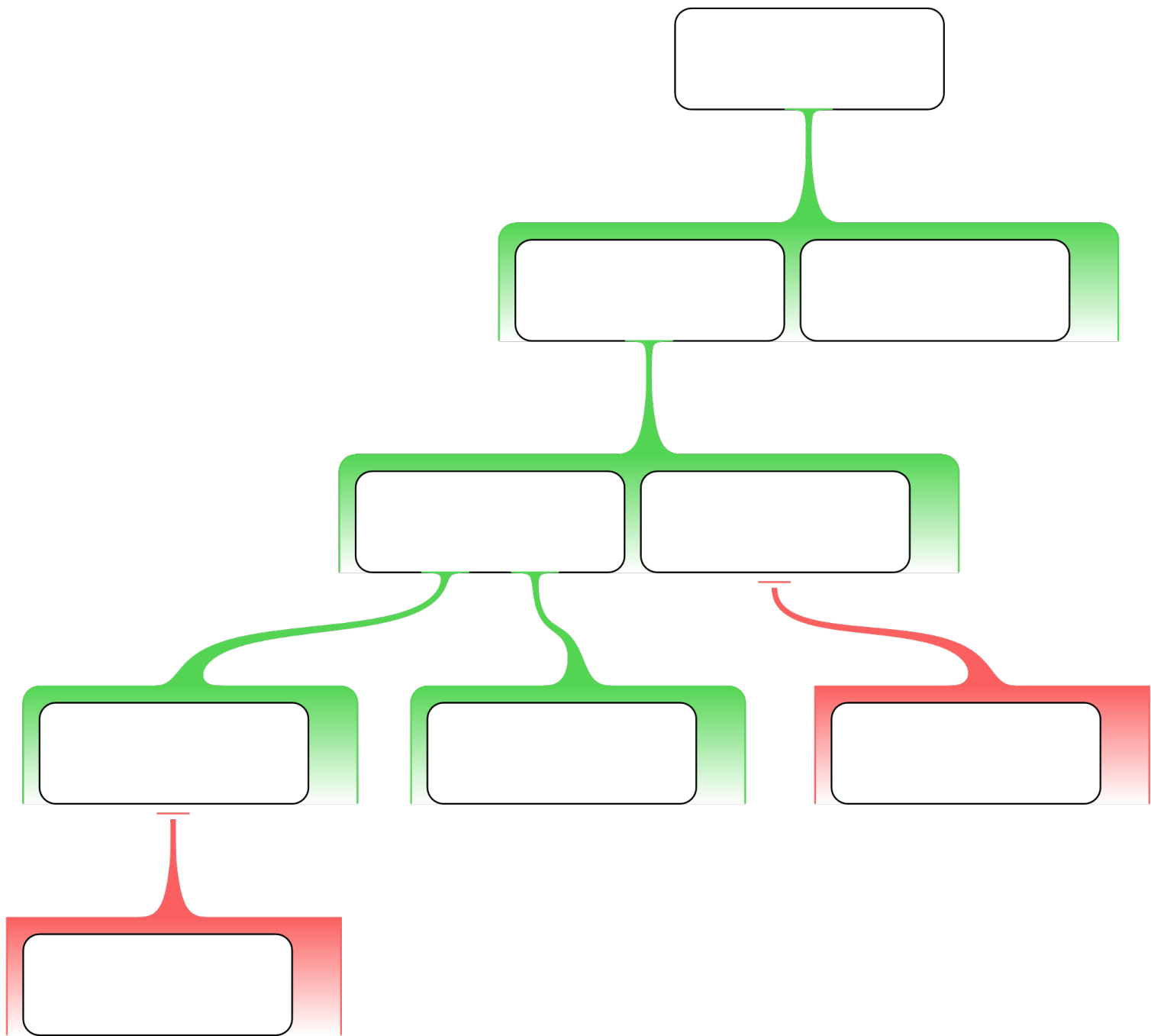
1. The cases of the disease have been more prominent in areas with larger mosquito populations, which could indicate that this is the early stages of a fularia virus outbreak. (Disease Control Center. Unidentified Disease Outbreak- Philtaria. 2019) However, around 50% of patients with the illness display 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.

- ✓ **1. Review reasoning**
- ✓ **2. Identify flaws**
- 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

- What is the impact of flaws on an argument?
- How do we assess the impact of a flaw given what the argument is trying to do?





(1)

The US stock market declined overnight by 2%, the worst decline that has ever occurred in the stock market. Given this decline, a recession is very likely in the near future.

(2)

The US stock market declined overnight by 2%, the worst decline that has ever occurred in the stock market. Given this decline, investors should pay particular attention to their stocks in the coming weeks.



We conclude that Professor Plum murdered John Vole. Only Professor Plum and Miss Scarlet had a motive to murder Vole. But it is very unlikely that Miss Scarlet is the murderer for two reasons. Firstly, her best friend Mrs Peacock, who knows her very well, says that Miss Scarlet wouldn't hurt a fly. Secondly, dozens of independent witnesses saw Miss Scarlet out at dinner during the time of the murder.

## Example: Kim Do-hun

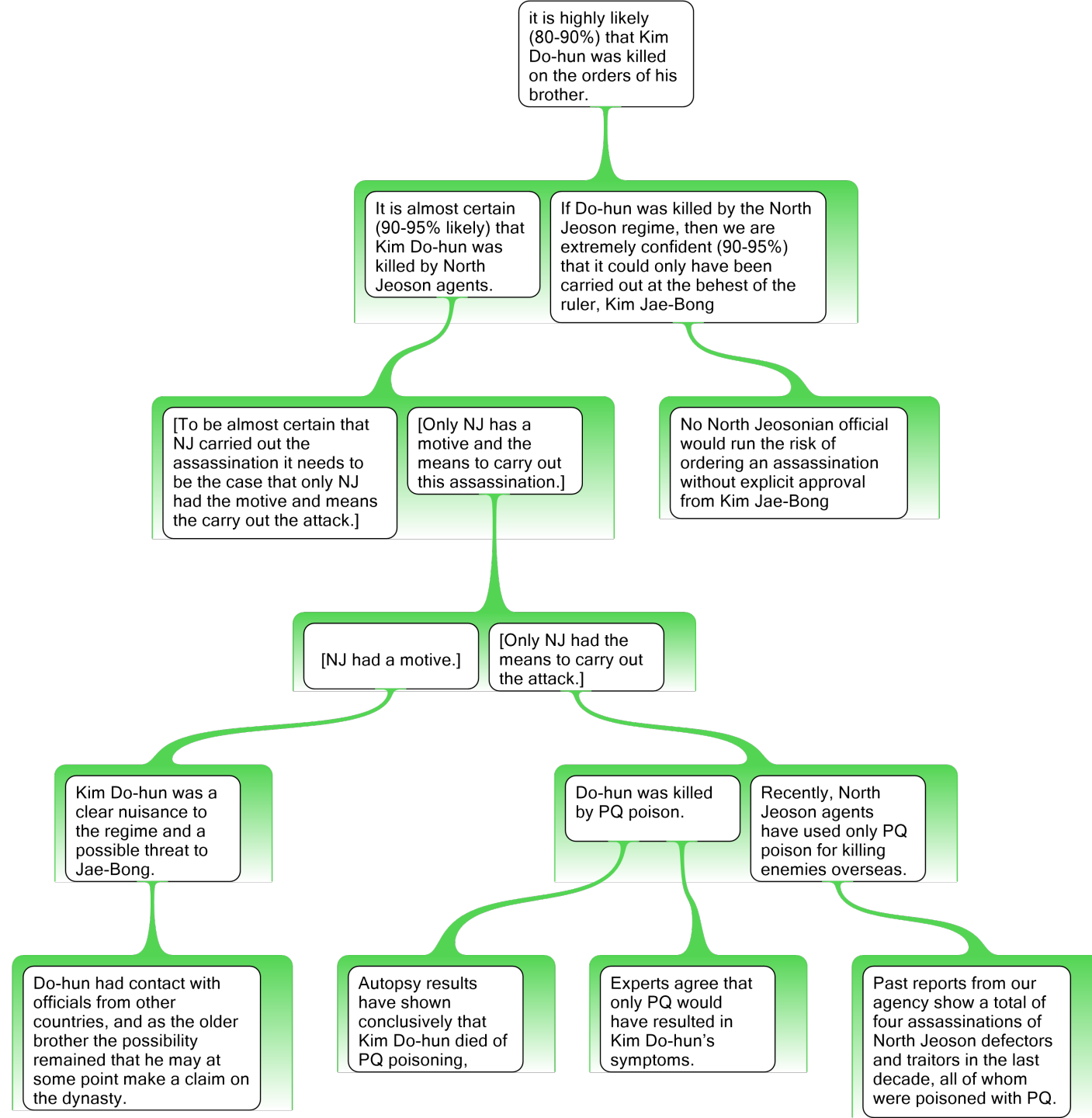


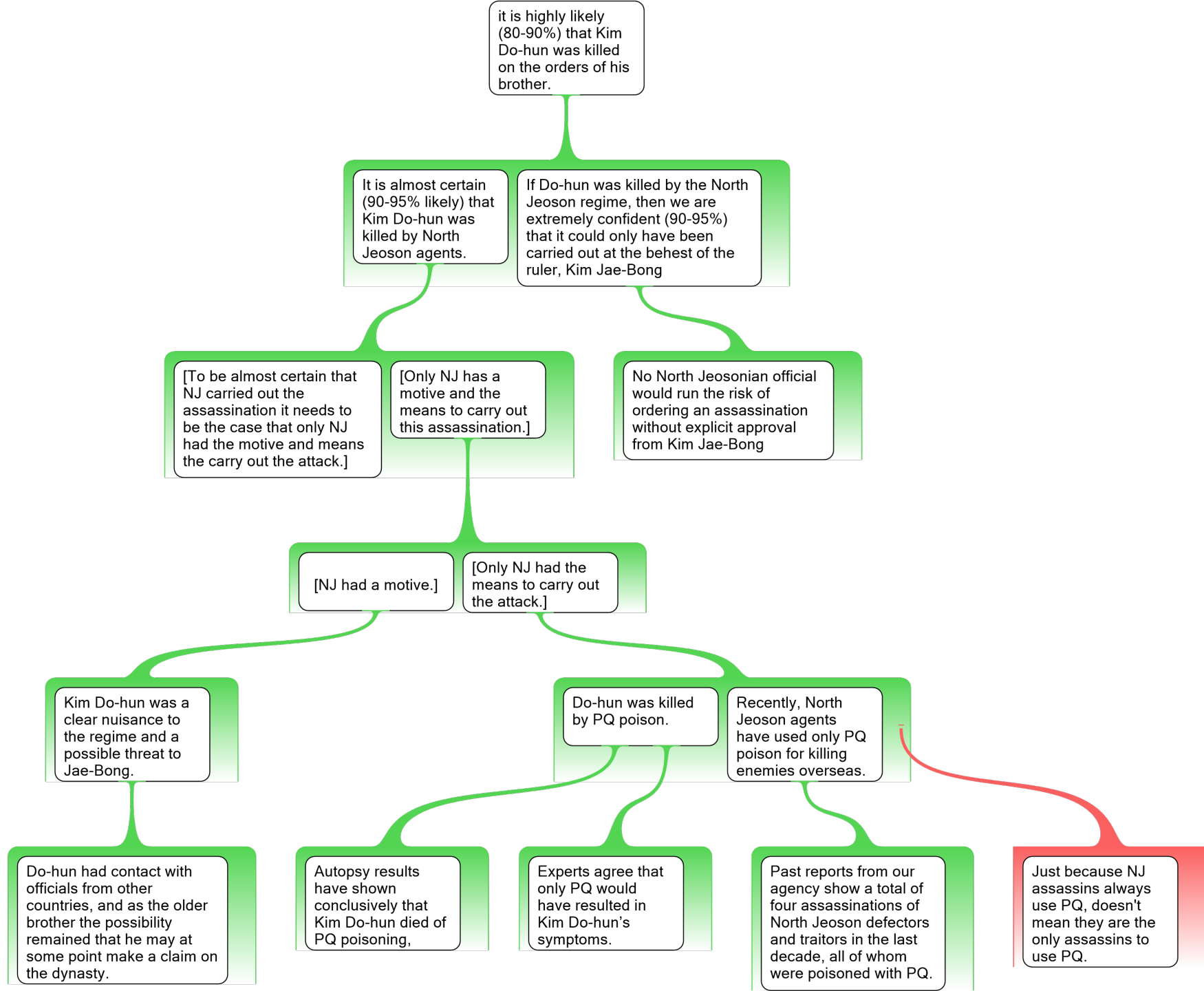
Kim Do-hun, the older brother of North Jeoson's leader, Kim Jae-Bong, was killed in his hotel room at the Casino Babylon in Macau (World Times. Kim Do Hun Found Dead in Hotel. Aug. 20, 2018). We assess that it is highly likely (80-90%) that Kim Do-hun was killed on the orders of his brother.

It is almost certain (90-95% likely) that Kim Do-hun was killed by North Jeoson agents. Kim Do-hun was a clear nuisance to the regime and a possible threat to Jae-Bong. While not overtly political, Do-hun had contact with officials from other countries, and as the older brother the possibility remained that he may at some point make a claim on the dynasty. Furthermore, autopsy results have shown conclusively that Kim Do-hun died of PQ poisoning, and experts agree that only PQ would have resulted in Kim Do-hun's symptoms. Recently, North Jeoson agents have used only PQ poison for killing enemies overseas. Past reports from our agency show a total of four assassinations of North Jeoson defectors and traitors in the last decade, all of whom were poisoned with PQ. These reports have been extensively verified, including by our international partner agencies. While it needs to be injected, PQ is highly effective: it's very transportable, relatively easy to produce, and fast-acting. Only immediate medical treatment will save a victim's life. This has made it North Jeoson agents' weapon of choice in recent years (Global Intelligence Services. North Jeoson and Kim Do-Hun Investigation, 2019. Unclassified).

If Do-hun was killed by the North Jeoson regime, then we are extremely confident (90-95%) that it could only have been carried out at the behest of the ruler, Kim Jae-Bong. All experts agree that the younger Kim has complete control over North Jeoson and runs it with a very tight fist. No North Jeosonian official would run the risk of ordering an assassination without explicit approval from Kim Jae-Bong. High-ranking defectors from North Jeoson report that Kim Jae-Bong is easily angered by unsanctioned action on any matter of importance (Global Intelligence Services. North Jeoson and Kim Do-Hun Investigation, 2019. Unclassified).







# Example: LFG planning Attack on Abaddon Military Base

Assessment: It is highly probable (80-95%) that the LFG insurgency group is planning to attack the Abaddon Military Base.

The LFG are clearly planning an attack in the Quazar region in the near future. Our agents on the ground report a clear influx of men of fighting age into the LFG stronghold city of Puktragar. (Special Operations Brigade. Tactical Intelligence Report #547OP, 2019. Classified.) Furthermore, imagery from surveillance drones also shows approximately 40% more people at a nearby training camp. At this time of year there is no other explanation for this build-up, and our agents don't report any event or activity that would explain it.

Furthermore, our surveillance of the digital communication of the Dreger criminal organisation confirms that the gang has been selling weapons, including RPGs and grenades, to the LFG. Recently intercepted ZeeChat communication between the groups shows that the LFG is purchasing drastically more munitions than they have previously. This arrangement with the Dreger gang has also been verified with our informant within the gang, and to date his information has generally proved to be correct. (Signals Intelligence Bureau. Dreger Gang Intercepts. Classified 2019; Special Operations Brigade. Informant 254 Report, 2019. Classified.)

Lastly, and perhaps most importantly, our assets in the regional villages and towns report that the LFG contacts are increasing active intel collection, collecting intel on our military bases in the area and on our recent operations, and reinforcing their connections with the local people.

Thus, our assessment is that it is highly likely (90-95%) that the LFG is planning an attack in the Quazar region.

As for the actual target, there are 3 military bases in the Quazar region: Abaddon, Orlando, and Damour. There are no other targets of strategic importance. Abaddon and Orlando are the closest bases to the LFG city of Puktrager, and as such are the most heavily fortified, but also the most strategically important. Furthermore, a recently recruited informant (Special Operations Brigade. Informant 213 Report, 2019. Classified.) claims that Damour is not a top priority for the LFG, so it appears that their current strategic planning is not to attack Damour anytime soon. The open terrain surrounding Orlando would make any assault extremely costly. Additionally, attacking Orlando would require crossing territory held by the warlord Brion Ruikzer, who regards the LFG with great suspicion, and there have been minor firefights between LFG scouting parties and Ruikzer's men. Even with the influx of men, it is hard to imagine that the LFG would have the strength to mount more than one major attack, and so far the LFG has proved to be a very cautious adversary (Special Operations Brigade. Tactical Assessment 45A - Orlando, 2019. Classified.). Given these considerations, we therefore believe that if an attack is carried out, it is close to certain (90-95%) that Abaddon will be the target.

Thus, our primary finding is that it is highly probable (80-95%) that the LFG insurgency group is planning to attack the Abaddon Military Base.

As an aside, while we lack the information required to determine when the LFG will be able to carry out their plan, or if anything is likely to interfere with it, recent analysis suggests that it is extremely unlikely that the LFG will abandon any planned attack because it is abundantly clear that a quick victory is required to boost the morale of their supporters and revive their PR campaign to attract more support. (LFG Strategic Assessment, #6757, 2019, Classified).

# Example: Recommendation to Deny Passport for Dylan Weinholt



From: Director, Antipodean Security Organisation  
To: Minister for Foreign Affairs, Antipodes  
Subject: Recommendation to Deny Passport for Dylan Wienholt

The applicable legislation cites that the Minister for Foreign Affairs has the power to cancel or to deny a passport based on a recommendation from a Competent Authority. The ASO is a Competent Authority. A Competent Authority can recommend cancellation or to deny if it suspects and has reasonable grounds that a person would be likely to engage in conduct contrary to security, or might infringe Antipodean law when a person is overseas.

The ASO recommends that the Minister deny Dylan Weinholt's application for a passport, on the grounds disseminated below.

The ASO suspects Dylan John Weinholt, DOB 12/4/98, likely to engage in conduct contrary to security outside the Antipodes. The ASO has been undertaking monitoring on Weinholt for 10 months. (Antipodean Security Office. Investigation #5687CT- subject: Weinholt. Classified.)

1. Weinholt has become radicalised in the International Cryptocurrency Union, a group intent to replace all major currencies around the world with distributed cryptocurrency - their own currency Randanium. They conceive of this as a crucial step toward a worldwide Anarcho-Libertarianism where all forms of Government have been terminated. Their strategy for terminating major currencies is to use cyber-warfare - hacking- to disrupt the software systems maintaining existing currencies. The ASO has currently two undercover assets in the union, and monitors communications of union members.

- Weinholt is an active member of the Antipodean branch of the International Cryptocurrency Union, and he attends weekly gatherings and is participating in their forum on the Dark Web
- Rules of the International Cryptocurrency Union require the members to have a signed agreement to the union objectives with a number of members as witnesses. (Antipodean Security Office. Investigation #5687CT- subject: Weinholt. Classified.)

2. Weinholt intends to travel overseas to coordinate a cyber warfare assault on all the major currencies.

- Our assets in the union have reported to us that the leaders of the branch have agreed that to evade the possible occurrence of eavesdropping by security services, critical planning for a global cyber strike on major currencies needs to be conducted in "face-to-face" meetings. Weinholt has been given this role, this is because, as a relatively new member and somebody who has not travelled to other countries, he has the most capacity to fly "under the radar." (Antipodean Security Office. Investigation #5687CT- subject: Weinholt. Classified.)

3. Weinholt has been arranging to meet with people in the US, Ukraine, Montenegro. (Antipodean Security Office. Investigation #5687CT- subject: Weinholt. Classified.) We have extensive knowledge of Weinholt's background and we can find no plausible explanation for this travel plan except pursuing the agenda stipulated above.



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