# **Codebook for LLM Output Validation Task**

## 1. Introduction and Purpose

This codebook provides guidance for validating the accuracy of automated extractions from parliamentary debate summaries. An LLM has been tasked with extracting four types of information about a specific speaker's contributions: **issues**, **positions**, **arguments**, and **proposals**. Your role is to verify whether these extractions accurately reflect what is communicated in the summary of the debate.

## 2. Task Overview

For each debate summary, you will:

- 1. Read the full debate summary on the left-hand side
- 2. Evaluate whether the LLM correctly extracted information for **the specified speaker only**
- 3. Assign a thumbs up  $(\checkmark)$  or thumbs down (X) for each of the four extraction categories (issues, positions, arguments, and proposals)
- 4. Document your reasoning in the notes field for any decisions that were noteworthy or difficult

**Critical Rule**: The LLM should ONLY extract information attributed to the **named speaker** identified at the top of the app. Information from other speakers is not relevant.

## 3. Definitions and Distinctions

#### 3.1 Extracted Issue

What it is: Key problems, concerns, or topics that the speaker raises or identifies as important.

## **Examples of issues:**

- "The inefficiency of current fragmented weapon systems"
- "Europe's dependence on external powers for defence"
- "Rising healthcare costs"
- "Climate change impacts on agriculture"

#### What it is NOT:

- Solutions or proposals
- The speaker's opinion on the issue
- Issues raised by other speakers

### 3.2 Extracted Position

**What it is**: The speaker's stance, viewpoint, or opinion on an issue. This expresses *what they believe* or *where they stand on an issue*.

### **Examples of positions:**

- "Europe must become more resilient and reduce dependence on external powers"
- "Supports increased military spending"
- "Opposes the current immigration policy"
- "Believes diplomatic engagement is preferable to military intervention"

## What it is NOT:

- Just identifying an issue
- Specific solutions
- The reasoning behind their position

### 3.3 Extracted Argument

**What it is**: The reasoning, evidence, or justification the speaker uses to support their position. This answers *why* they hold their position.

### **Examples of arguments:**

- "Fragmented weapon systems hamper effective defence efforts across EU nations"
- "Historical evidence shows that economic sanctions are more effective than military intervention"
- "Data indicates that prevention programmes reduce long-term costs"

### What it is NOT:

- The position itself
- Proposals for action
- Arguments made by other speakers

## 3.4 Extracted Proposal

**What it is**: Concrete suggestions, recommendations, or policy actions the speaker puts forward to address issues. This answers *what should be done*.

### **Examples of proposals:**

- "Establish a European Defence Community to foster greater coordination"
- "Increase defence budget to 2% of GDP"
- "Implement a carbon tax by 2026"
- "Create a joint procurement system for military equipment"

### What it is NOT:

- Vague aspirations without specific actions
- Proposals made by other speakers
- Background context about existing policies

## 4. Coding Criteria

## 4.1 When to Give a Thumbs Up

For each category, award a thumbs up when:

- The extraction accurately reflects content attributed to the specified speaker
- All relevant information for that category is captured (completeness)
- No information from other speakers is included
- The summary is clear and concise
- **Special case**: The extracted text does not contain information (e.g. the speaker's position) AND there is no mention of that information in the debate summary

### 4.2 When to Give a Thumbs Down

For each category, award a thumbs down when:

- Information from other speakers is included
- Relevant information from the specified speaker is missing (incompleteness)
- The extraction is vague or unclear
- The extraction distorts or misrepresents what the speaker said
- The extracted text contains content that is not supported by the debate summary

### 4.3 Notes Field Guidance

Provide notes when there is something unusual or difficult about the coding decision. Your notes should:

- Specify what is unusual (e.g., "Includes Jessika Roswall's argument, not the specified speaker's")
- Indicate what is missing (e.g., "Omits speaker's proposal about joint procurement")
- Be brief but specific enough for review

## 5. Examples

## **Example 1: Correct Extraction (All Thumbs Up)**

Speaker: Guy Verhofstadt

**Debate excerpt**: "Guy Verhofstadt emphasises that fragmented defence systems are costly and inefficient. He argues that Europe must develop independent military capabilities. He proposes creating a European Defence Union by 2027."

#### **Extracted Text**:

 "Fragmented defence systems are costly and inefficient. Europe must develop independent military capabilities. Current fragmented systems lead to waste and reduced effectiveness. Create a European Defence Union by 2027"

**Coding**:  $\checkmark \checkmark \checkmark \checkmark$  (all thumbs up)

**Example 2: Incorrect Attribution (Thumbs Down)** 

Speaker: Nathalie Loiseau

**Debate excerpt**: "Nathalie Loiseau supports diplomatic solutions. However, Jessika Roswall argues that military deterrence is necessary given recent aggression."

#### **Extracted Text**:

"Supports diplomatic solutions but acknowledges military deterrence is necessary"

**Coding**: **X** ( thumbs down for extracted position) **Notes**: "Includes Jessika Roswall's position on military deterrence, not Loiseau's"

## **Example 4: Empty String Correct (Thumbs Up)**

Speaker: Maria Schmidt

**Debate excerpt**: "The debate focused on military spending. Nathalie Loiseau and Guy Verhofstadt presented extensive proposals."

#### **Extracted Text**:

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**Coding**:  $\checkmark \checkmark \checkmark$  (all thumbs up) **Explanation**: The speaker a speech but it contained no Issues, Positions, Arguments, or Proposals, so empty strings are correct.

## 6. Edge Cases and Special Scenarios

## 6.1 Multiple Issues/Positions/Arguments/Proposals

If a speaker raises multiple issues, positions, arguments, or proposals, please make note in the textbox of the ones that showed up in the extraction.

## **6.2 Overlapping Categories**

Sometimes a single statement might span categories:

• "We must act now [position] because climate data shows urgency [argument] by implementing a carbon tax [proposal]"

### **6.3 Implied vs Explicit Statements**

## **✓** ACCEPTABLE (Explicit or Direct)

### **Example 1 - Position:**

- **Debate text**: "I support increased defence spending"
- LLM extraction: "Supports increased defence spending"
- **Verdict**: ✓ Explicitly stated

#### **Example 2 - Position:**

- **Debate text**: "We must increase our defence budget immediately"
- LLM extraction: "Supports increasing the defence budget"
- Verdict: ✓ Direct statement, acceptably paraphrased

### **Example 3 - Argument:**

• **Debate text**: "Our current weapons systems are fragmented across 27 countries, leading to duplication and waste. This costs European taxpayers billions."

- LLM extraction: "Fragmented weapons systems create inefficiency and financial waste"
- Verdict: ✓ Directly stated reasoning, properly condensed

### **Example 4 - Proposal:**

- **Debate text**: "I call on the Commission to table legislation for a European Defence Union before the end of this year"
- **LLM extraction**: "Proposes the Commission introduce European Defence Union legislation by year-end"
- Verdict: ✓ Clear, explicit proposal

## X NOT ACCEPTABLE (Too Much Inference Required)

### **Example 1 - Over-inference:**

- **Debate text**: "We cannot continue with inadequate budgets"
- LLM extraction: "Supports a 2% GDP defence spending target"
- **Verdict**: **X** The speaker mentions inadequate budgets but doesn't specify what level would be adequate. The LLM has inferred a specific policy position not stated.

### **Example 2 - Over-inference:**

- **Debate text**: "The United States has been a valuable partner, but circumstances are changing"
- LLM extraction: "Europe should reduce dependence on the United States"
- **Verdict**: **X** Too much interpretive leap. The speaker notes change but doesn't explicitly advocate for reduced dependence.

### **Example 3 - Over-inference:**

- **Debate text**: "Many member states have expressed concerns about the current approach"
- LLM extraction: "Opposes the current policy"
- **Verdict**: **X** The speaker reports others' concerns but doesn't explicitly state their own position.

### **Example 4 - Attribution confusion:**

- **Debate text**: "Some argue we need more military spending, but we must consider diplomatic solutions first"
- LLM extraction: "Supports increased military spending"
- **Verdict**: **X** The speaker is presenting others' arguments and then countering them. The LLM has misattributed the position.

### **BORDERLINE CASES (Use Judgement)**

#### Example 1:

• **Debate text**: "This fragmented approach is simply not working. We need coordination, we need efficiency, we need a unified system"

- **LLM extraction**: "Current fragmented defence approach is ineffective; supports creating a unified defence system"
- Verdict: ✓ Acceptable while "unified system" paraphrases "coordination/efficiency/ unified system", it's a reasonable synthesis of explicitly stated views

### Example 2:

- **Debate text**: "When we look at the threats we face cyber attacks, hybrid warfare, territorial aggression it's clear our current capabilities are insufficient"
- LLM extraction: "Current defence capabilities are insufficient to address modern threats"
- Verdict: ✓ Acceptable the speaker explicitly states capabilities are insufficient

**General Rule**: If you need to ask "Is the LLM reading between the lines here?" and the answer is more than a minimal "yes," code it as thumbs down. The extraction should reflect what the speaker actually said, not what they might have meant.

### **6.4 Attribution Ambiguity**

If the debate summary is unclear about attribution, give the benefit of doubt to the LLM unless there's clear evidence of misattribution.

### 6.5 Paraphrasing

The LLM output doesn't need to use exact wording. Accurate paraphrasing is acceptable if meaning is preserved.

## 7. Quality Control Tips

- 1. **Read thoroughly**: Always read the full debate summary before coding
- 2. **Check attribution carefully**: Verify that extracted content truly belongs to the specified speaker
- 3. **Consider completeness**: Ask yourself, "Did the LLM capture the main points?"
- 4. **Be consistent**: Apply the same standards across all validation tasks
- 5. **When in doubt**: If borderline, lean towards thumbs up if the extraction is substantially correct and make a note of origins of doubt
- 6. **Document concerns**: Use notes liberally to explain decisions

## 8. Common Mistakes to Watch For

- Cross-speaker contamination: Content from other speakers appearing in the extraction
- Category confusion: Positions appearing in Issue summary, proposals appearing in Argument summary, etc.
- **Incomplete extraction**: Missing significant contributions from the speaker
- Overextraction: Including tangential points not central to the speaker's contribution
- False positives: Extracting content when the speaker made no relevant contributions

## 9. Final Checklist

Before finalising your coding, ask:

- Is all extracted content attributed to the correct speaker?
- Is each piece of information in the correct category?
- Are the main points captured?
- Are there any obvious omissions?
- Have I documented my reasoning for any tricky decisions?

**Remember**: Your validation helps improve the accuracy of automated extraction. Be thorough, consistent, and don't hesitate to provide detailed notes when issues arise.