



# Speech Acts and Arguments

Seminar: Advanced Topics in  
Information Retrieval and NLP



Presented by:  
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# Questions that we need to answer

- What is a Speech Act? (Answered in first presentation)
- How many illocutionary acts are there and what are their components?
- How can an illocutionary act define a good argument?

# Outline

- Paper 1: A classification of Illocutionary acts - *John R. Searle, University of California*
- Paper 2: Meaning and Speech Acts - *John R Searle*
- Paper 3: The Speech Acts of Arguing and Convincing in Externalized Discussions - *F.H. Van Eemeren and R. Grootendorst*
- Suggested Guideline - Using Speech Acts For Arguments

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# Paper 1 - “A Classification of Illocutionary Acts”

Title: A classification of illocutionary acts.

Author: John R. Searle, University of California

Source: Language in Society, 5, pp 1-23. doi:10.1017/S0047404500006837.

# Paper 1 - “A Classification of Illocutionary Acts”

## Illocutionary Force

An Illocutionary act is characterized by the **Illocutionary force**.

An **Illocutionary force** is the combination of the characteristics of different illocutionary dimensions.

# Paper 1 - “A Classification of Illocutionary Acts”

## Illocutionary Acts Dimensions

Linguistically, there are significant dimensions of differences between illocutionary acts. Searle defines 12 of them.

The most important 3 dimensions are:

1. Illocutionary Point
2. Direction of Fit
3. Expressed Psychological State

# Paper 1 - “A Classification of Illocutionary Acts”

## Illocutionary Acts Dimensions

Linguistically, there are significant dimensions of differences between illocutionary acts. Searle defines 12 of them.

The most important 3 dimensions are:

1. Illocutionary Point
2. Direction of Fit
3. Expressed Psychological State

Form the basis of a taxonomy of the fundamental classes of illocutionary acts

Based on these dimensions, Searle defines the categories of Speech Acts

# Paper 1 - “A Classification of Illocutionary Acts”

## Illocutionary Acts Dimensions › Illocutionary Point Dimension

(1) Differences in the point of the act ⇒ **Illocutionary Point (IP)**

- e.g: The point and purpose of each speech act:
  - Order point and purpose is: to get the hearer to do something
  - Description point and purpose is: a representation of how something is
  - Statements and promises point and purpose is: undertaking of an obligation by the speaker to do something

# Paper 1 - “A Classification of Illocutionary Acts”

## Illocutionary Acts Dimensions › Illocutionary Point Dimension

(1) Differences in the point of the act  $\Rightarrow$  **Illocutionary Point (IP)**

- **IP** is only part of the **illocutionary force (IF)**
  - **IP** IS NOT the illocutionary force. Consider the following example:
    - order = Clean the kitchen
      - Define a hierarchy between speaker and hearer
      - Or define negative attitude
    - request = Would you please clean the kitchen?
      - Has more positive attitude than the “order”
    - $\Rightarrow$  **IP**(order) = **IP**(request) but **IF**(order)  $\neq$  **IF**(request)

# Paper 1 - “A Classification of Illocutionary Acts”

## Illocutionary Acts Dimensions › Direction of Fit Dimension

(2) Differences in the direction of Fit between words and world ⇒ **Direction of Fit (DF)**

- Words = Propositional content
- e.g:
  - Assertions: words *match* the **world**. Symbolized by: ↓
  - Promises & requests: **world** *matches* the words. Symbolized by ↑

⇒ The **Illocutionary Force** determines how the propositional content relates to the world through the **DF** dimension

# Paper 1 - “A Classification of Illocutionary Acts”

## Illocutionary Acts Dimensions › Expressed Psych. State Dimension

(3) Differences in expressed psychological state ⇒ Expressed Psychological state

- In the performance of any illocutionary act with a propositional content the speaker expresses some attitude, state, etc... to that propositional content
- e.g:
  - **B:** expresses a **belief** (states, explains, asserts, claims, postulates, declares, deduces)
  - **I:** expresses an **intention** (promises, vows, threatens and pledges)
  - **W:** expresses a **desire/want** (orders, commands, requests, asking, prayer, pleading, begging)
  - **P:** expresses a **pleasure** (congratulation, felicitations, welcome)

# Paper 1 - “A Classification of Illocutionary Acts”

## Illocutionary Acts Kinds

Searle defines 5 basic kinds of Illocutionary Acts based on the dimensions:

1. Representatives
2. Directives
3. Commissives
4. Expressives
5. Declarations

# Paper 1 - “A Classification of Illocutionary Acts”

## Illocutionary Acts Kinds

Class	Illocutionary point	Direction of Fit	Psychological state
Representatives	Commit the speaker to the truth of the expressed proposition	↓	B
Directives	Speaker wants the hearer to do something	↑	W
Commissives	Commit the speaker to some future course	↑	I
Expressives	express the psychological state specified in the sincerity condition about a state of affairs specified in the propositional content	NA	All
Declarations	e.g.: I declare are, You are fired...	Both	NA

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# Paper 2 - “Meaning and Speech Acts”

Title: Meaning and Speech Acts

Author: John R. Searle,

Published by: Duke University press on behalf of Philosophical review

Source: The philosophical review. Vol. 71. No.4 (Oct. 1962). pp.423-432

# Paper 2 - “Meaning and Speech Acts”

Searle argues in his paper that using a specific word W is not associated to a certain kinds of speech acts.

The meaning of a Word in a sentence can not indicates the Speech act(s) of this sentence.

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# Paper 3 - “The Speech Acts of Arguing and convincing in Externalized Discussions”

Title: The Speech Acts of Arguing and convincing in Externalized Discussions

Author: Van Eemeren and R. Grootendorst

Published by: North Holland Publishing Company

Source: Journal of Pragmatics 6 (1982) 1-2

# Paper 3 - “The Speech Acts of Arguing and convincing in Externalized Discussions”

So far, the Illocutionary acts categorization was done on the level of a sentence. But since an argument is constituted from different sentences:

# Paper 3 - “The Speech Acts of Arguing and convincing in Externalized Discussions”

So far, the Illocutionary acts categorization was done on the level of a sentence. But since an argument is constituted from different sentences:

*“... alongside elementary illocutionary acts we also distinguish **complex illocutionary acts**. The elementary illocutionary acts then relate to the uttering of sentences each of which individually has particular illocutionary force and the complex illocutionary acts relates to the uttering of sentences which together constitute a particular textual whole which can be allocated its own illocutionary force and which accordingly can be called an illocutionary act complex”*

# Paper 3 - “The Speech Acts of Arguing and convincing in Externalized Discussions”

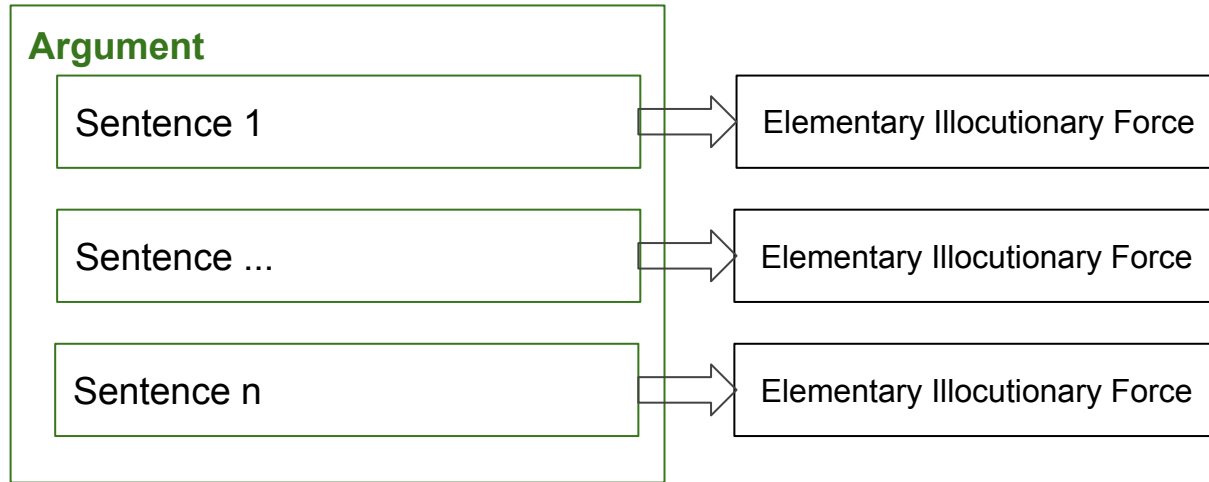
## Argument

Sentence 1

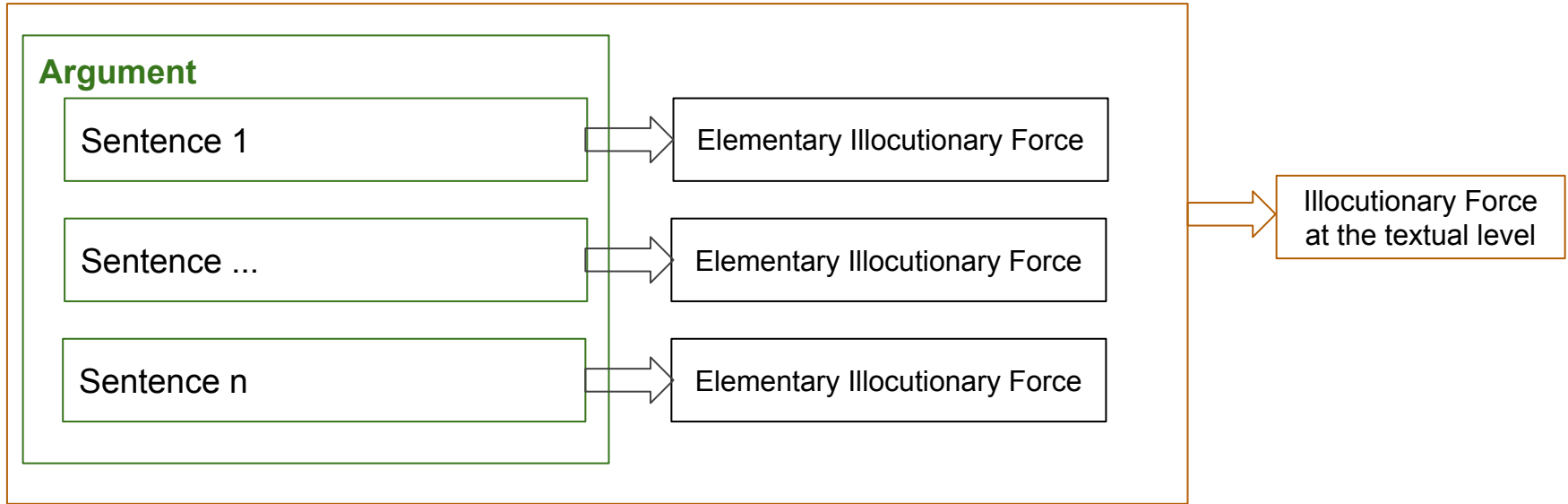
Sentence ...

Sentence n

# Paper 3 - “The Speech Acts of Arguing and convincing in Externalized Discussions”



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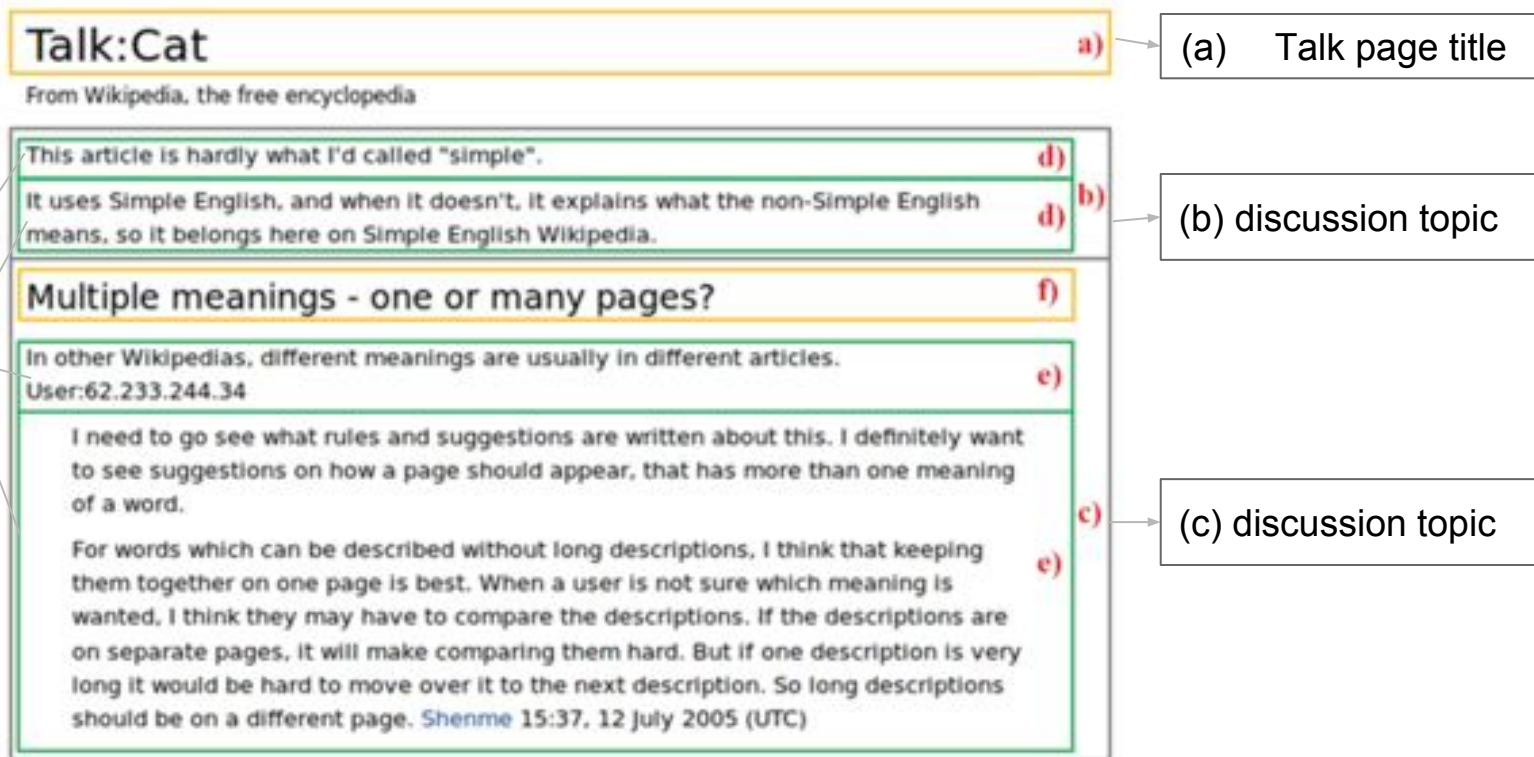
# Suggested Guideline - Using Speech Acts for Arguments

## Purpose and Corpus

- Corpus: From Wikipedia Talks
- Aim:
  - Detect an argument
  - Detect the quality of an argument

# Suggested Guideline - Using Speech Acts for Arguments

## Annotation Schema



# Suggested Guideline - Using Speech Acts for Arguments

## Annotation Schema

- Phase 1:
  - Unit = an independent clause (A single sentence can have 1..\* clauses)
  - Label each unit: **unit illocutionary force**

# Suggested Guideline - Using Speech Acts for Arguments

## Annotation Schema

- Phase 1: Define Illocutionary force of each sentence clause
- Phase 2:
  - Each turn will be our element to detect an argument
  - The turn is our textual level
  - In each turn:
    - we already defined the illocutionary force of each unit
    - ⇒ define the illocutionary force at the textual level (which is the turn)
      - If we detect an argument, the set of units are grouped under *argument label*
      - The other sentences stay as they are: they have an IF on the level of Clause

# Suggested Guideline - Using Speech Acts for Arguments

## Annotation Schema

- Phase 1: Define Illocutionary force of each sentence clause
- Phase 2: Define textual level illocutionary force for each turn
- Phase 3:
  - Each discussion will be our element to detect an argument
  - The discussion is our textual level
  - In each discussion:
    - we already defined the illocutionary force of each unit and the IF in each turn
    - ⇒ define the illocutionary force at the textual level (which is the discussion\_
      - If we detect an argument, the set of units are grouped under *argument label*
      - The other sentences stay as they are: they have an IF on the level of Clause

# Suggested Guideline - Using Speech Acts for Arguments

## Annotation Schema

- Phase 1: Define Illocutionary force of each sentence clause
- Phase 2: Define textual level illocutionary force for each turn
- Phase 3: Define textual level illocutionary force(s) for the discussion
- Phase 4: Calculate the strength for each argument

# Suggested Guideline - Using Speech Acts for Arguments

## Annotation Schema - Elementary Illocutionary act

- In each turn:
  - For each sentence we need to define the **sentence illocutionary force**
  - Then we can define the **textual level illocutionary force**

# Suggested Guideline - Using Speech Acts for Arguments

## Annotation Schema - Elementary Illocutionary act

- Elementary Illocutionary act (check slide 14)
  - Representatives Class:
    - Label: Information Providing
      - *detect arguments elements: conclusion and premises*

# Suggested Guideline - Using Speech Acts for Arguments

## Annotation Schema - Elementary Illocutionary act

- Elementary Illocutionary act (check slide 14)
  - **Representatives Class** to detect an argument
  - **Directives class**: Speaker wants the hearer to do something
    - These sentences can show that the speaker has a high level of confidence which might indicate a strong argument or a negative attitude

# Suggested Guideline - Using Speech Acts for Arguments

## Annotation Schema - Elementary Illocutionary act

- Elementary Illocutionary act (check slide 14)
  - Representatives Class to detect an argument
  - Directives class: Class to define the strength of an argument
  - Commissives class: Speaker commits to an action in the future
    - Report of performed action
    - Commitment to an action
    - ⇒ *This class will help us to detect the **strength** of the previous argument*

# Suggested Guideline - Using Speech Acts for Arguments

## Annotation Schema - Elementary Illocutionary act

- Elementary Illocutionary act (check slide 14)
  - Representatives Class to detect an argument
  - Directives class: Class to define the strength of an argument
  - Commissives class to detect the strength of an argument
  - Expressive
    - “I apologize..”, “Thank you...”
    - The phrases can indicate agreement or disagreement with an opinion
    - They can indicate either : adding a new premise to an existing argument or starting a new argument

# Suggested Guideline - Using Speech Acts for Arguments

## Annotation Schema - Elementary Illocutionary act

- Elementary Illocutionary act (check slide 14)
  - Representatives Class to detect an argument
  - Directives class: Class to define the strength of an argument
  - Commissives class to detect the strength of an argument
  - Expressive class that Indicates adding a new element to an existing argument or starting a new argument
  - Declaration class:
    - “I disagree”, “I agree”...
    - As the expressive class, this class can indicates adding a new element to an existing argument or starting a new argument.

# Suggested Guideline - Using Speech Acts for Arguments

## Annotation Schema - Elementary Illocutionary act Labels

Class	Label	Explanation	Example
<b>Representatives</b>	R_O	Stating an opinion	There is good reason to believe the FBI claim about the recording is right
	R_F	Stating a fact	They used it to blackmail him,
	R_C	Stating a belief based on a fact	...which would not make sense if the recording was ambiguous.
	R_FC	R_F + R_C. A fact and belief based on that fact	Classifying it for a long time also awakens suspicions about trying to avoid a scandal and shielding a national icon.
	R_FS	Stating a belief based on personal opinion	Faithfulness is a prime virtue. (This can be a R_O if it has premises)

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**Helps detecting the elements of an argument**

Class	Label	Explanation	Example
Directive	DO	Expressing an opinion/claim. Can be a <b>claim for an argument</b> by requesting	Would you do that?
	DO-	Expressing an opinion/claim. Can be a <b>claim for an argument</b> by ordering	Do that!
Comissives	C	Expressing a future commitment	I will fix that
Directive / Comissives	DCO	Expressing an opinion/claim. Can be a <b>claim for an argument</b>	Let us do that
Expressives	E-	expressing a negative opinion towards the hearer. Can indicate <b>counter argument</b> (R_O, R_FS)	I think that's bullshit
	E+	expressing a positive opinion towards the hearer. Might indicate the <b>support of an argument</b>	Sorry for misunderstanding you
Declaratives	D-	Declaring something negative against the hearer. Can indicate <b>counter argument</b> (R_O, R_FS)	I disagree
	D+	Declaring something positive to the hearer. Might indicate the <b>support of an argument</b>	I agree

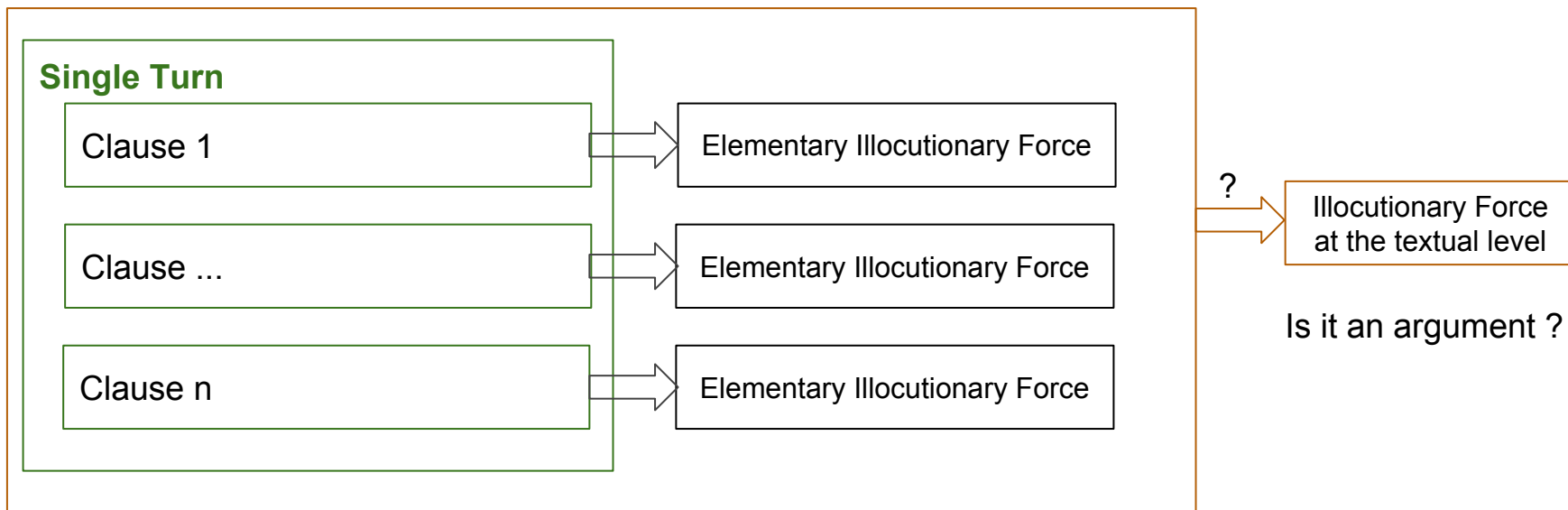
# Suggested Guideline - Using Speech Acts for Arguments

## Annotation Schema - Textual Level Illocutionary act

- In each turn:
  - For each sentence we need to define the **sentence illocutionary force**
  - Then we can define the **textual level illocutionary force**

# Suggested Guideline - Using Speech Acts for Arguments

## Annotation Schema - Textual Level Illocutionary act > Argument



# Suggested Guideline - Using Speech Acts for Arguments

## Annotation Schema - Argument Strength in context of a discussion

- The strength of an argument:
  - Can be calculated as follows
    - Having an argument A
    - We can define the strength of an argument by calculating the number of supporting/unsupporting labels and supporting arguments and unsupporting arguments

# Suggested Guideline - Using Speech Acts for Arguments

## Annotation Schema - Argument Strength in context of a discussion

- **SSA:** Strongly Supporting argument A  $\rightarrow$ 
  - $\sum ((E+, R_*) \cup (D+, ARG)) * WEIGHT^1$ 
    - (E+, R\_\*) Sorry for misunderstanding you. XYZ prove that A is true
    - (D+, R\_\*) I agree with you. XYZ prove that A is true
- **SCA:** Strongly attacking argument A  $\rightarrow$ 
  - $\sum ((E-, R_*) \cup (D-, ARG)) * WEIGHT$
- **WSA:** Weakly Supporting argument A  $\rightarrow$ 
  - $\sum ((E+) \cup (D+))$
- **WCA:** Weakly Counter argument A  $\rightarrow$ 
  - $\sum ((E-) \cup (D-))$

1: The weight is to define the importance of supporting/attacking an argument and also adding a premise/argument to this agreement or disagreement

Thank You!