

# Speech Acts and Electronic Records

William Underwood  
Georgia Tech Research Institute  
Atlanta, Georgia

DigCCurr2009  
Chapel Hill, NC  
April 3, 2009

- Motivation
- Speech Acts
- Analysis of Speech Acts in Presidential Records
- Speech Acts and Archival Description
- Method for Recognizing Speech Acts in E-records
- Next Steps

## Overview

To be a record of an activity, a record must:

- Carry out an action, e.g., a recommendation that someone do something
- Provide evidence of an action already carried out, e.g., a report of actions taken
- Provide information on which to base action, e.g., a biography of a candidate for federal office
- Provide information that is about acts but is irrelevant to performing an action, e.g., a statement by the Press Secretary

**Motivation:**

**Records and Actions**

Actions are a part of the description of items, file units and record series

Example of an item (record) description in NARA's Archival Research Catalog (ARC)

This letter was typewritten by President George H. W. Bush and addressed to his children: George, Jeb, Neil, Marvin, and Doro. He expresses his happiness at their Christmas celebration held at Camp David, then writes concerning his conflicted feelings as he prepares for the possibility of war with Iraq.

**Motivation: Actions  
and Record Description**

Archival review in response to FOIA requests requires recognition of the actions expressed in records

Presidential Records Act restriction on disclosure a(5)  
"Confidential Advice"

"confidential communications requesting or submitting advice, between the President and his advisors, or between his advisors"

Example of action expressing confidential advice:

"I further recommend that the President look for opportunities to speak at an appropriate event indicating his knowledge of and interest in this issue, ..."

**Motivation:**

**Actions and Archival Review**

- *Performative verb* - Verb whose action is accomplished merely by saying it or writing it.

*I recommend that you attend the conference.*

- *Illocutionary force* of a message.

*recommend*

- *Propositional content* of a message

*you attend the conference*

- An implicit performative sentence is a sentence in which the illocutionary force is not made explicit by naming the force.

*I shall be there*

## Speech Acts

- Declarative, imperative and interrogative sentences also express speech acts.
- Declarative (state)
  - You completed the report
- Imperative (request)
  - Please, complete the report.
- Interrogative (ask)
  - Did you complete the report?

## Speech Acts: Implicit

- An indirect speech act is a speech act that is performed indirectly by way of performing another.

Can you pass the salt? (ask)

in the appropriate context means

Please, pass the salt. (request)

- Textual structure can also indicate illocutionary force.

Example: a section heading RECOMMENDATIONS can indicate the sentences in a section have the illocutionary force recommend.

## Speech Acts

- Illocutionary point
  - assertive, commissive, directive, declarative, expressive
- Strength of illocutionary point
- Mode of achievement
- Propositional content conditions
- Preparatory condition
- Sincerity condition
- Degree of strength of sincerity condition

## **Speech Act: 7 Components of Illocutionary Force**

- “In general, to accept P is to commit ourselves to do P (or to permit that P be done) while presupposing (as a preparatory condition) that the hearer or some other person has requested P in previous conversation.”  
[Vanderveken 1990, p 184]
- In document 193, the President accepts John Frohnmayer’s resignation as Chairman of the National Endowment.

I received your letter of resignation today and, with sincere thanks and appreciation for your service, I accept your resignation effective May 1.

## Speech Act: Definition of Accept

- Analyzed 120 Presidential records to identify:
  - explicit performative sentences
  - implicit performative sentences
  - speech acts indicated by textual structure
  - indirect speech acts
- Identified 67 speech acts

## **Analysis of Speech Acts in Presidential Records**

- *assert, deny, state, declare(1), tell(1), report, advise(1), remind, inform, certify(1), agree(1), acknowledge, praise(1), commit, pledge, direct, request, ask(1), ask(2), urge, encourage, invite, order(1), prohibit, suggest(2), propose, recommend, declare(2), resign, confirm, nominate, appoint, authorize, pray, terminate, veto, approve(1), disapprove, revoke, mourn, congratulate, thank, apologize, and welcome(2).*
- *concur, salute, amend, counsel, welcome(1), tender(2), call on, block, retire, proclaim, delegate, designate, determine, find, reject(2), endorse, appreciate, regret, trust(1) , believe, want, desire, and intend.*

## **Analysis of Speech Acts in Presidential Records**

- Item Descriptions were constructed for each of the 120 documents.
- Action in the description was created based on the speech acts identified in the document.

Examples:

- Signature Memorandum from Boyden Gray to the President recommending the nomination of Ronald B. Leighton to be a US District Judge.
- Letter from President Bush to President Mikhail Gorbachev suggesting an informal meeting.
- Memorandum from President Bush to Boyden Gray requesting an analysis of the War Powers Resolution.
- Letter from Susan Black to President Bush expressing appreciation for nomination and commitment to serve.
- Referral Memorandum from Sally Kelley to FEMA requesting appropriate action to a letter from Beryl Anthony to the President.

## Speech Acts and Description

Illocutionary Force Indicating Device	Number of records in which IFID was used to create the record's description
Explicit Performative Sentence	77
Implicit Performative Sentence	31
Speech Act Indicted by Textual Structure	11
Indirect Speech Act	1
Total	120

## Speech Acts and Description

Input: Textual Document

1. Information Extraction
2. Document Type Recognition
3. English Sentence Parser
4. Speech Act Transducer
  - Annotation of Explicit Speech Acts
  - Annotation of Implicit Speech Acts
  - Annotation of Speech Acts Indicated by Text Structure
  - Annotation of Indirect Speech Acts
  - Annotation of the Primary Speech Acts

Output: [document(e1), author(e1, S), addressee(e1, H), act(e1 F(P)), topic(e1, T), date(e1, D)]

## **A Method for Recognizing Speech Acts in E-Records**

- Created rules for annotating approx. 100 performative verbs
- Tested on corpus of 120 documents
- Next create rules for annotating implicit speech acts and those speech acts indicated by textual structure.
- Test hypothesis: Primary speech acts are those in document with strongest illocutionary point.
- Experiment to determine performance of the method on documents not previously analyzed
- Generate item descriptions

## Next Steps