natural interaction based on language

Reading and Writing as a Creative Cycle: the Need for a Computational Model

Pablo Gervás

Instituto de Tecnología del Conocimiento
Universidad Complutense de Madrid

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Overview

Motivation for the ICTIVS model

Grounding the ICTIVS model

Creativity in the ICTIVS model

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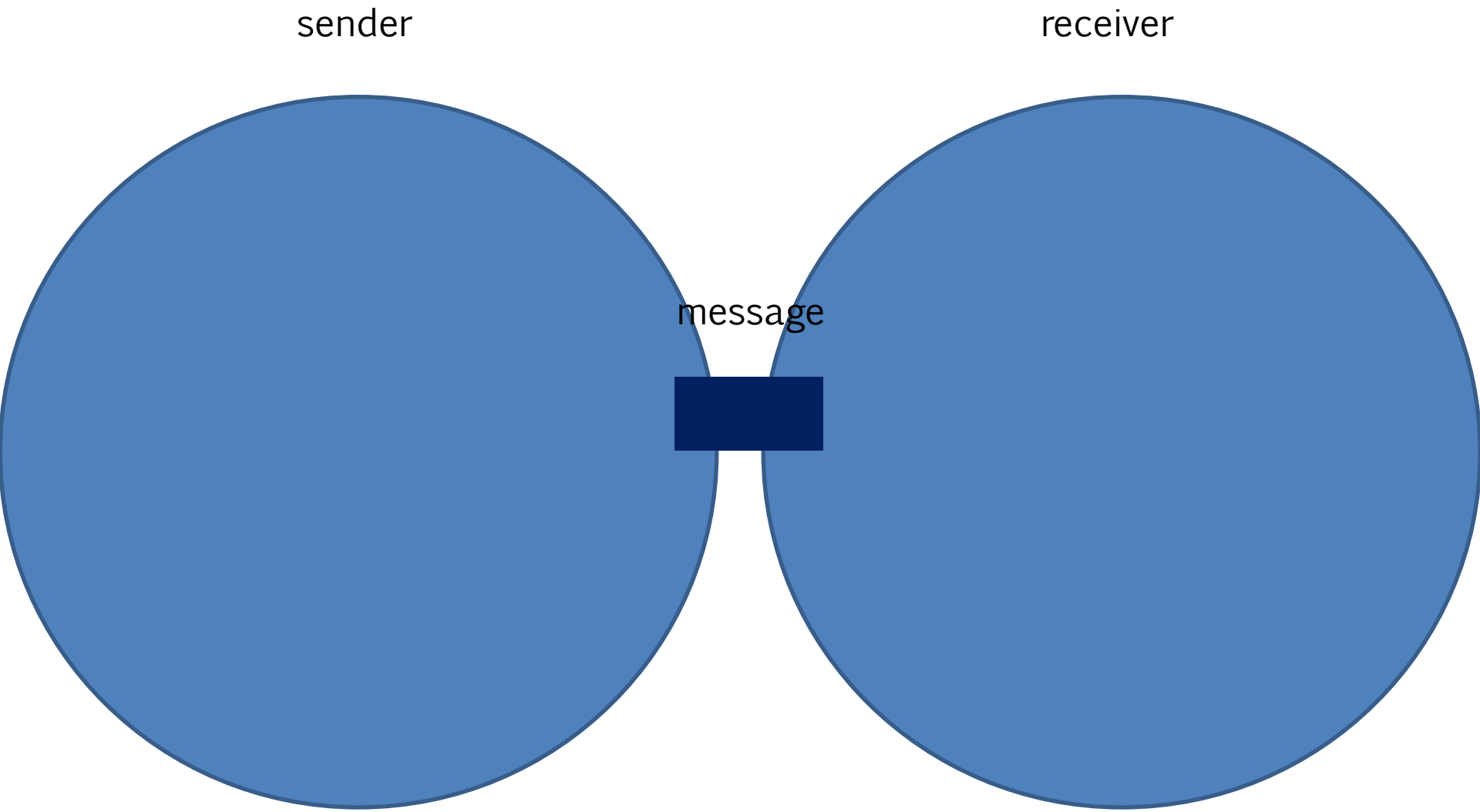
Motivation for the ICTIVS model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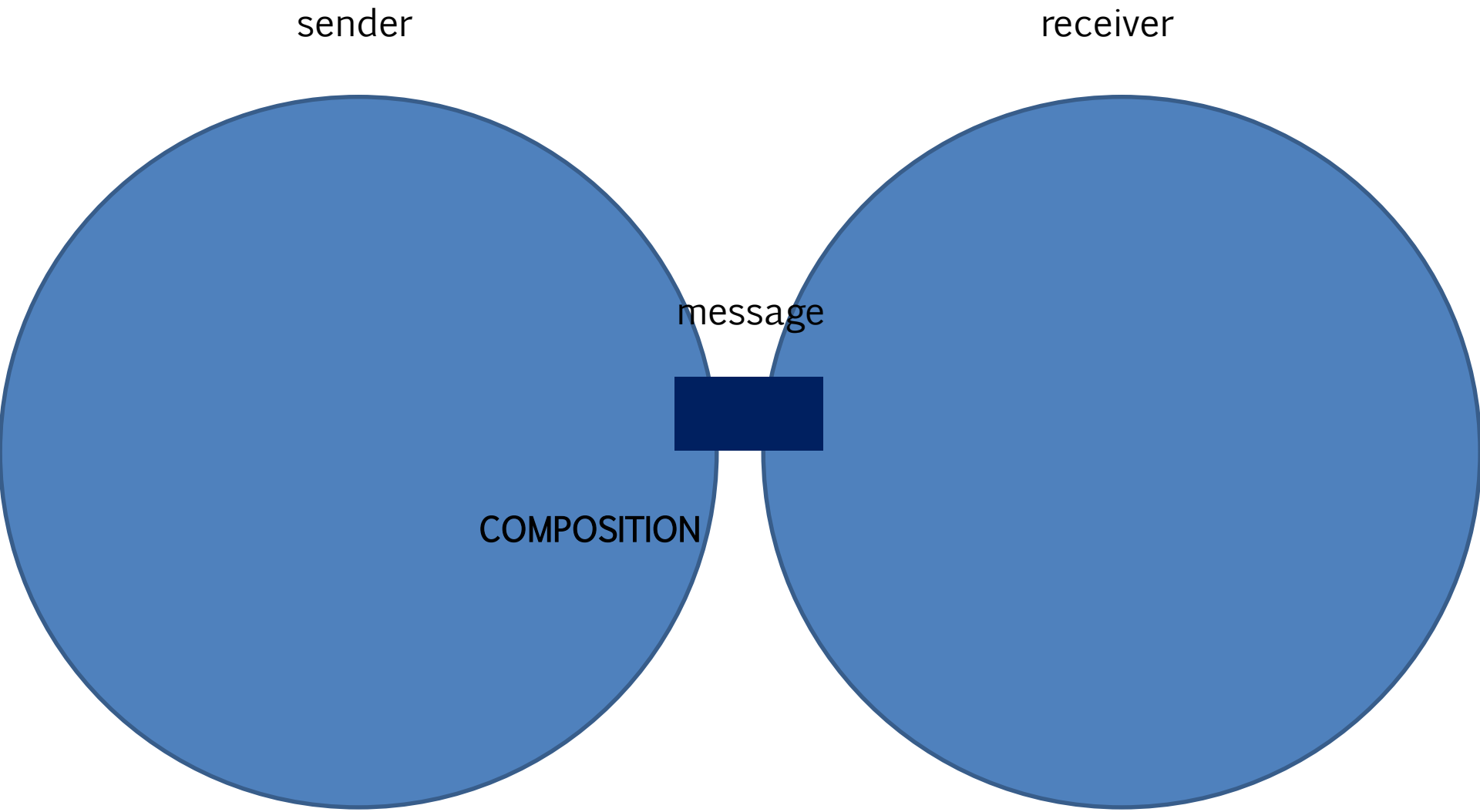
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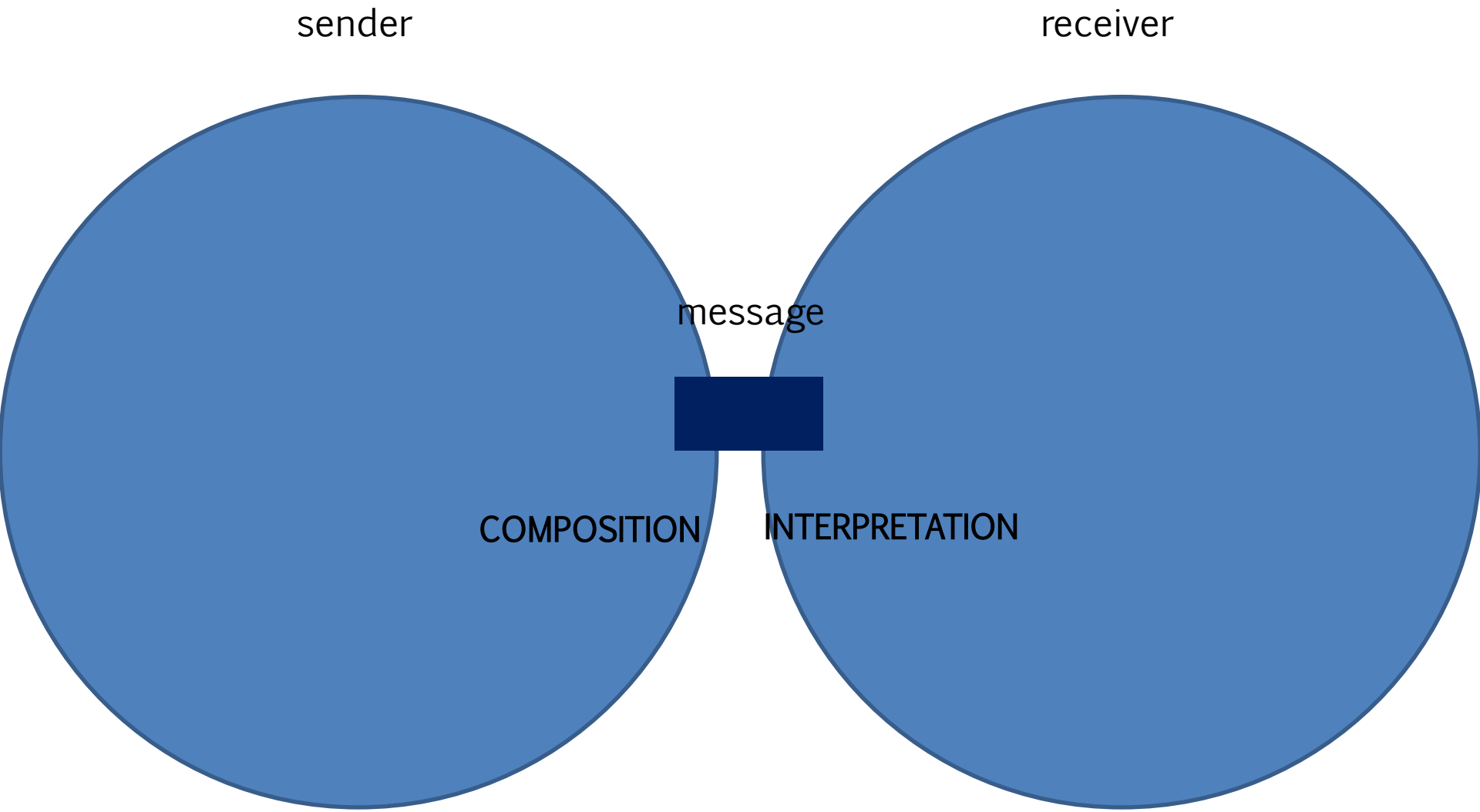
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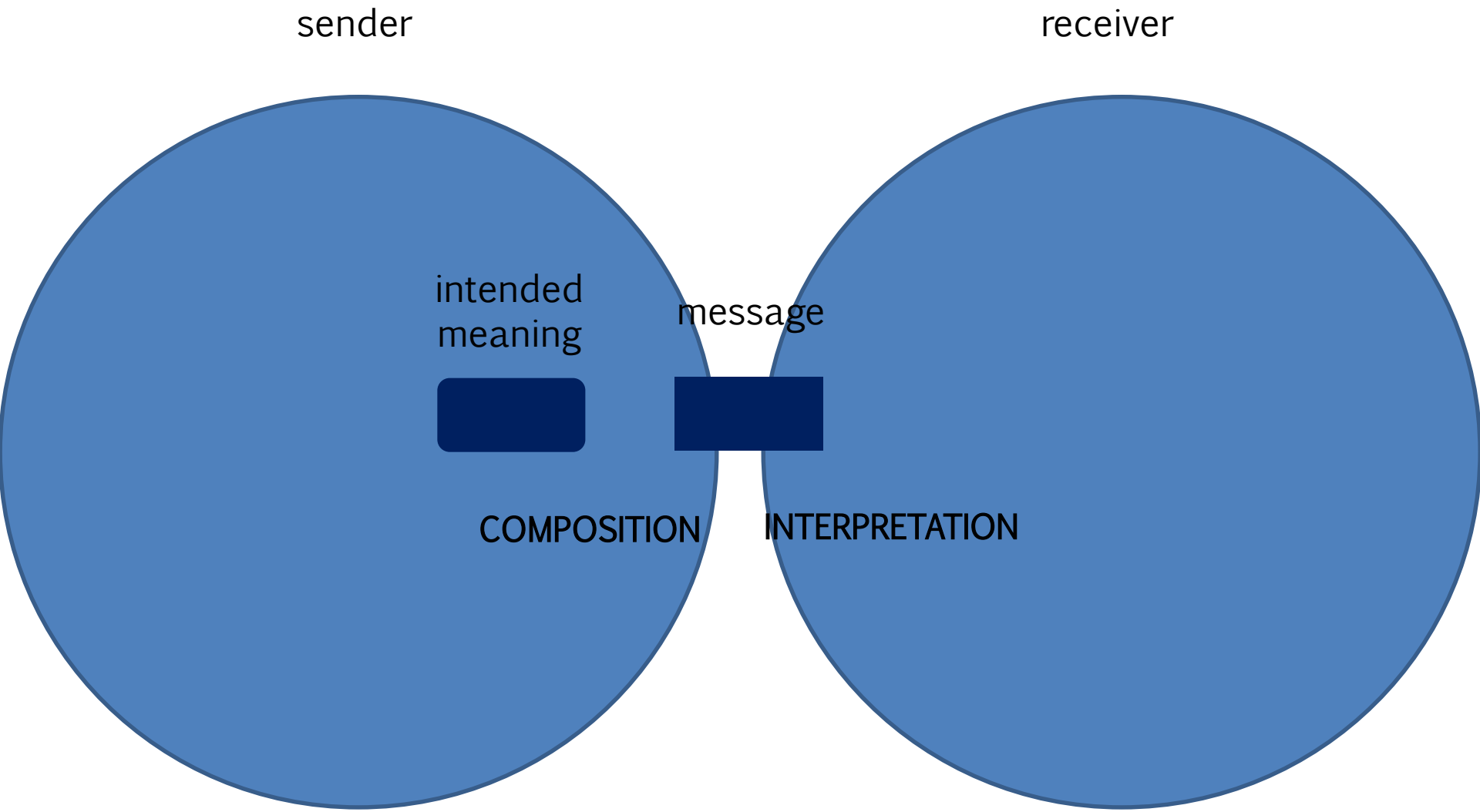
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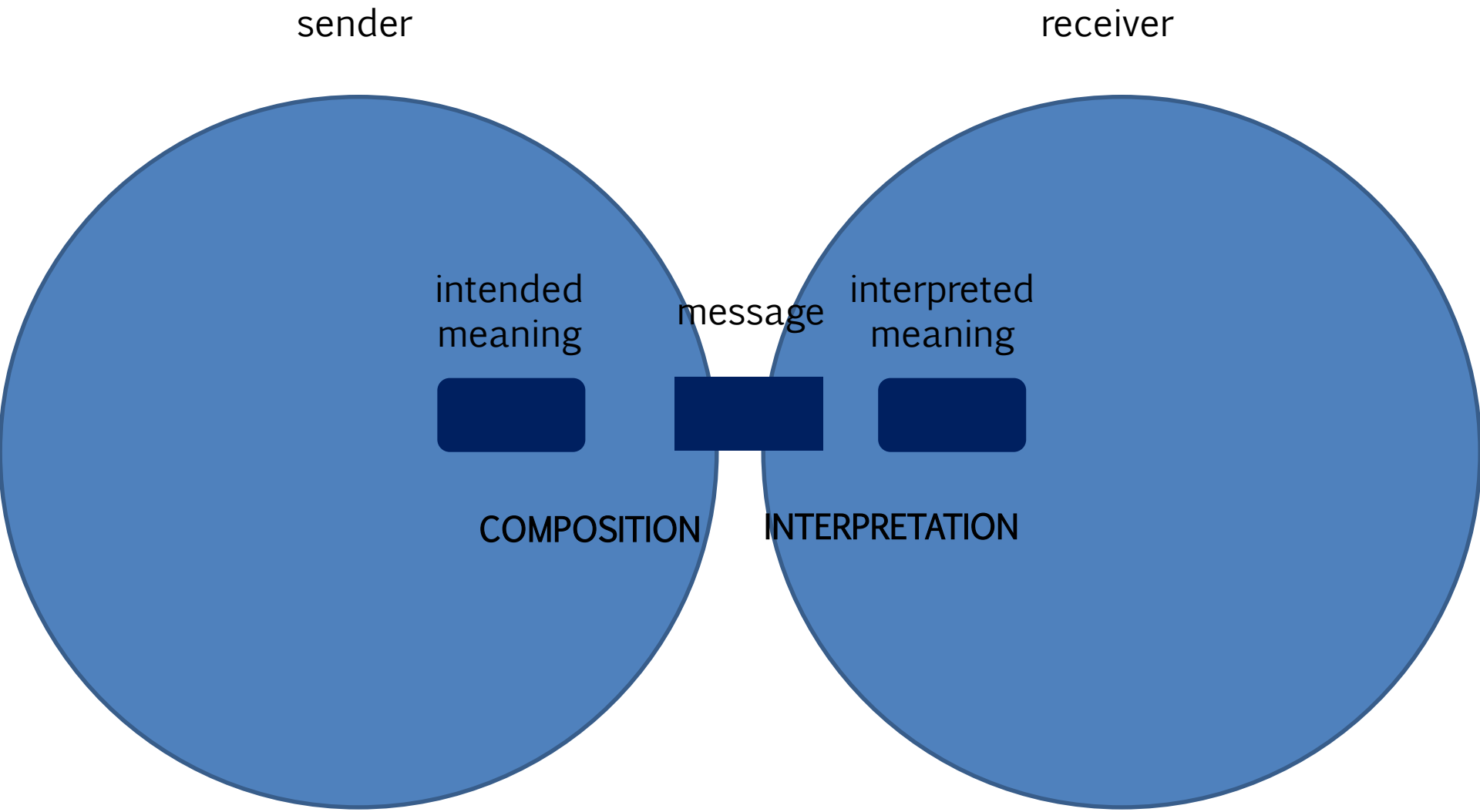
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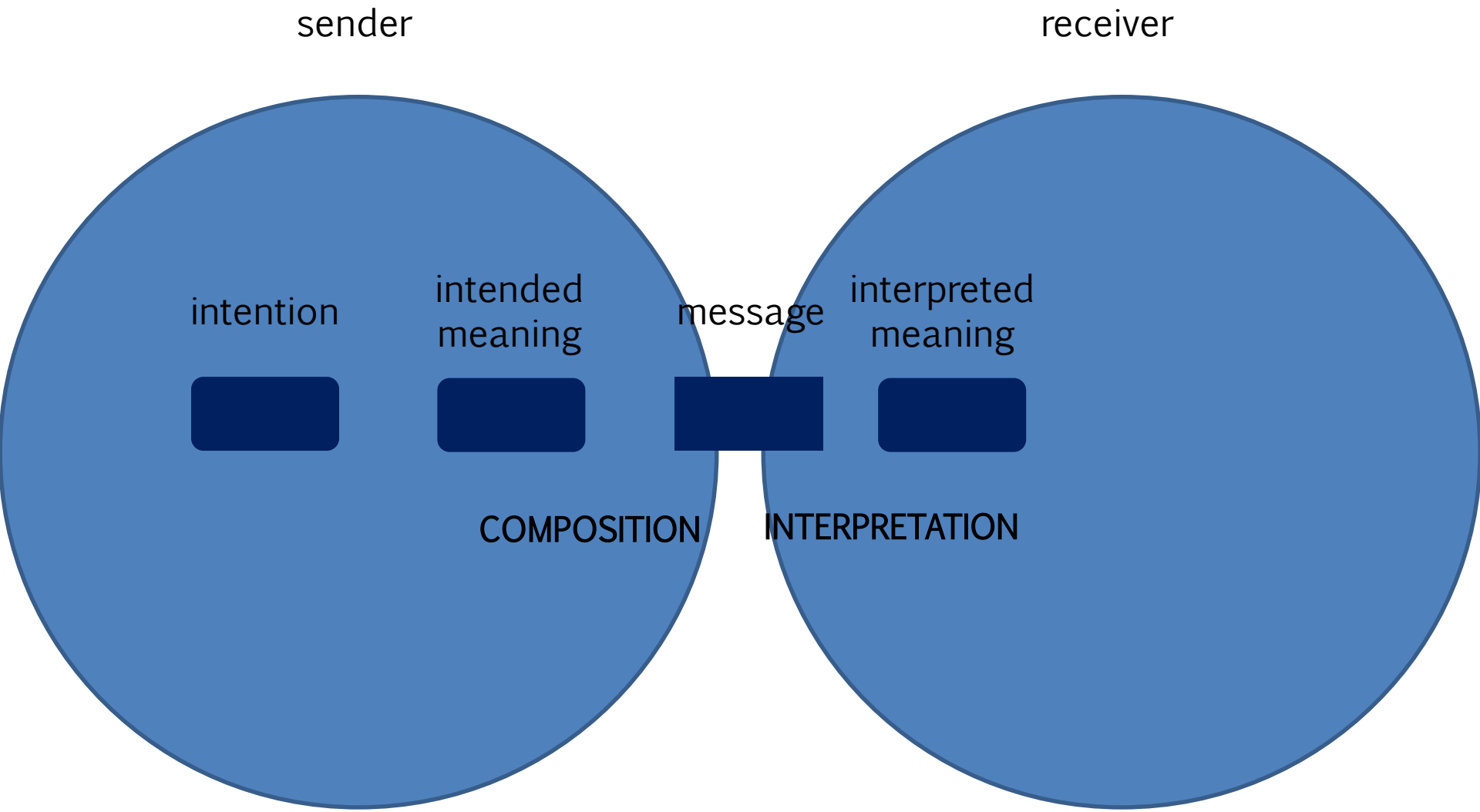
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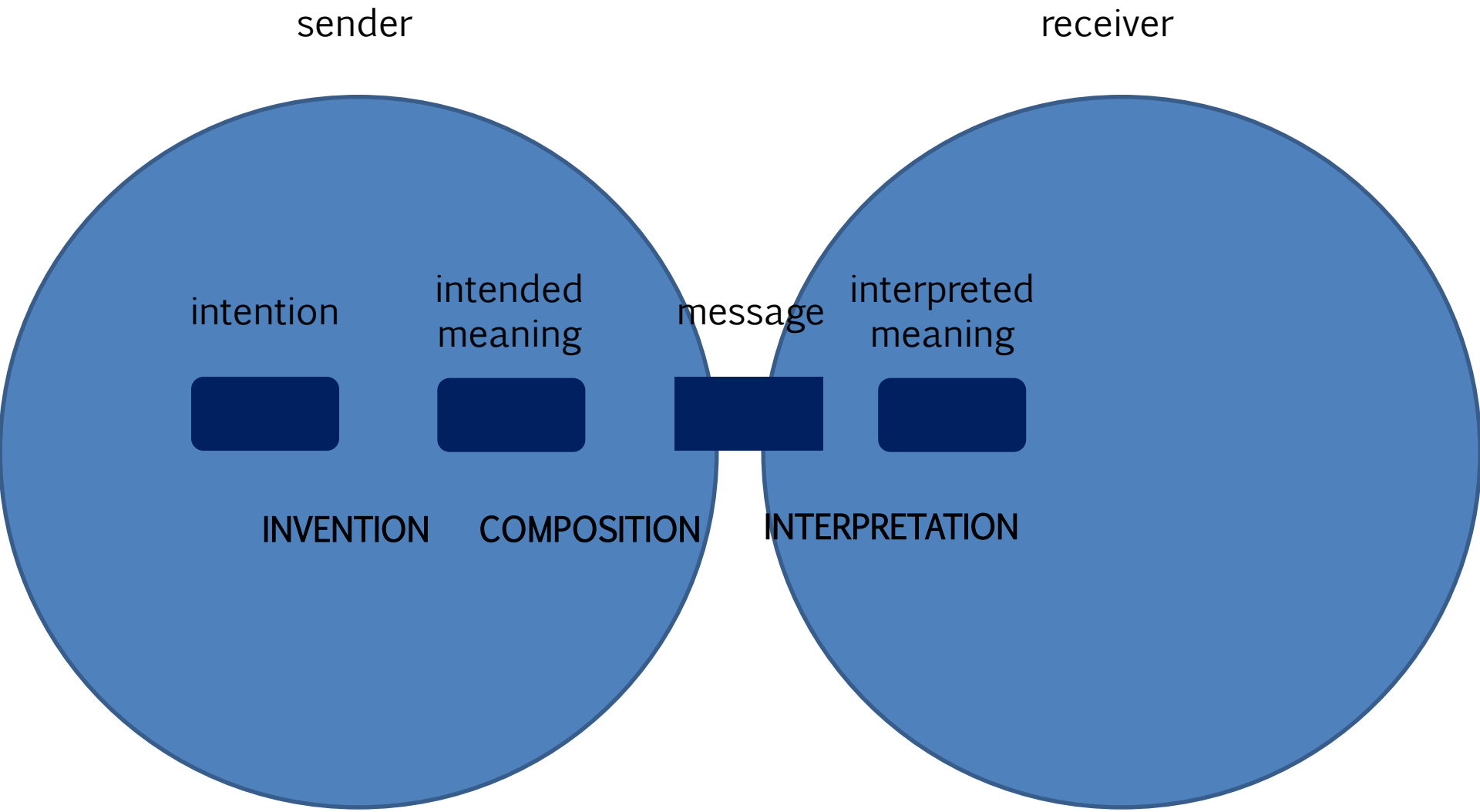
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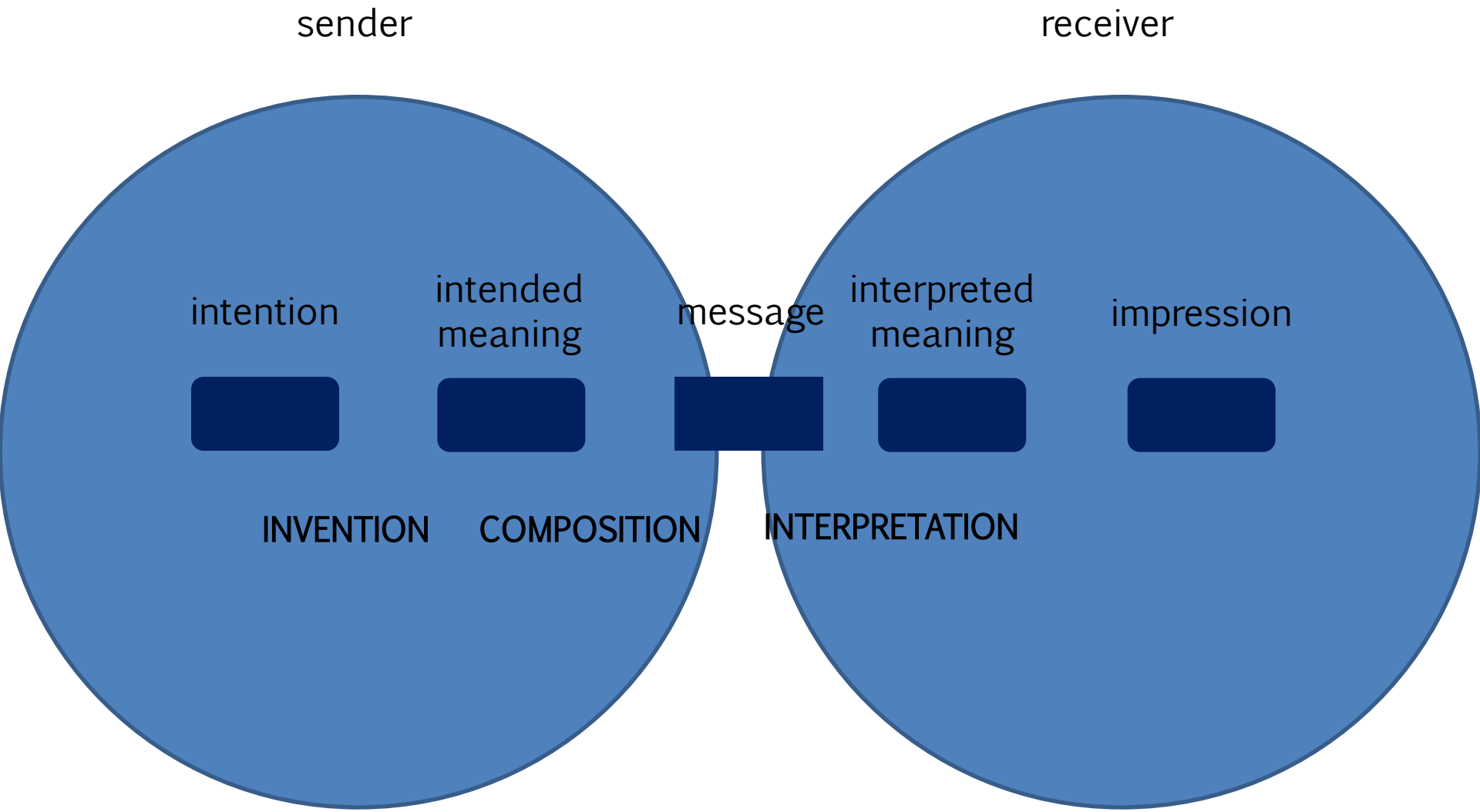
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COMPOSITION
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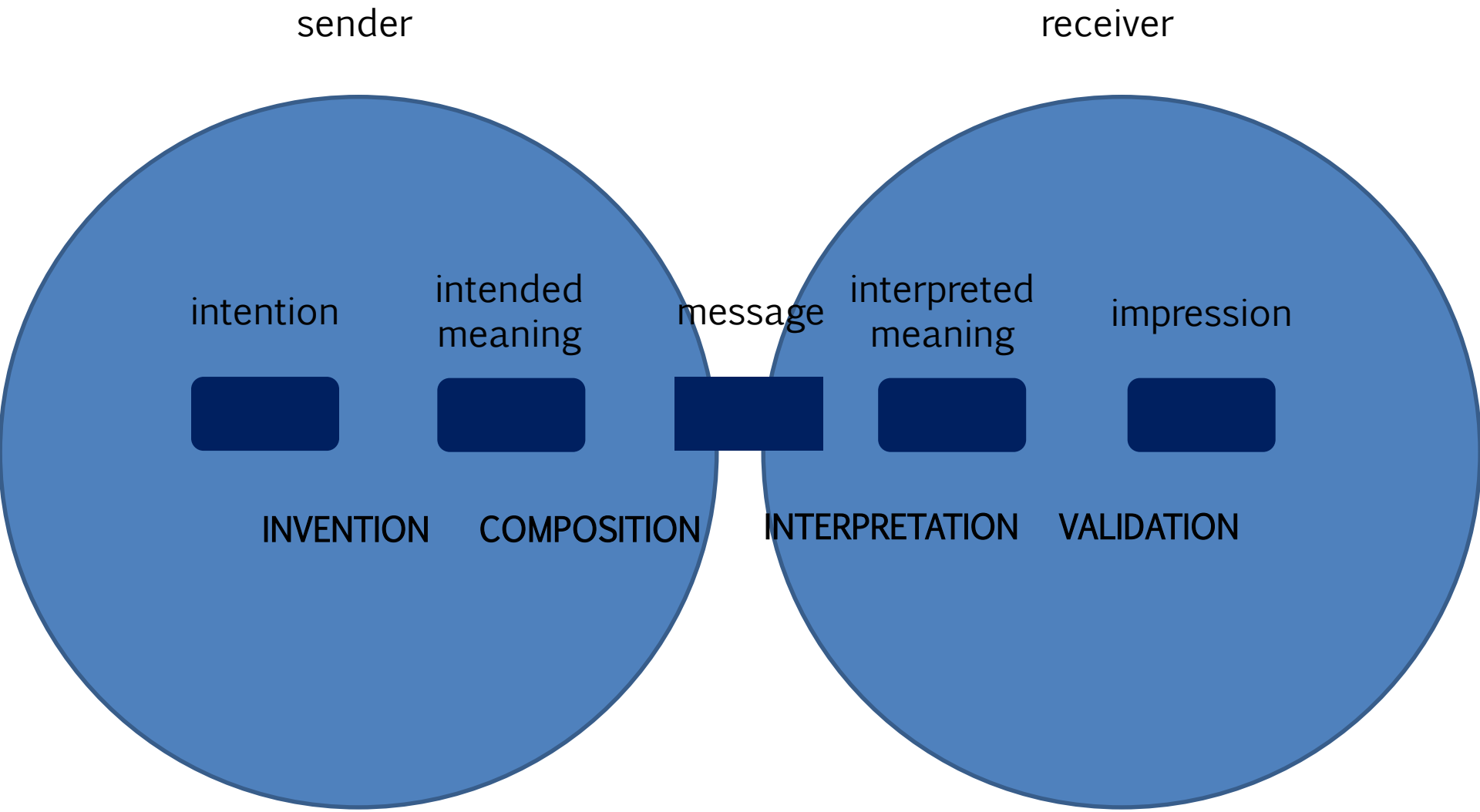
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INTERPRETATION
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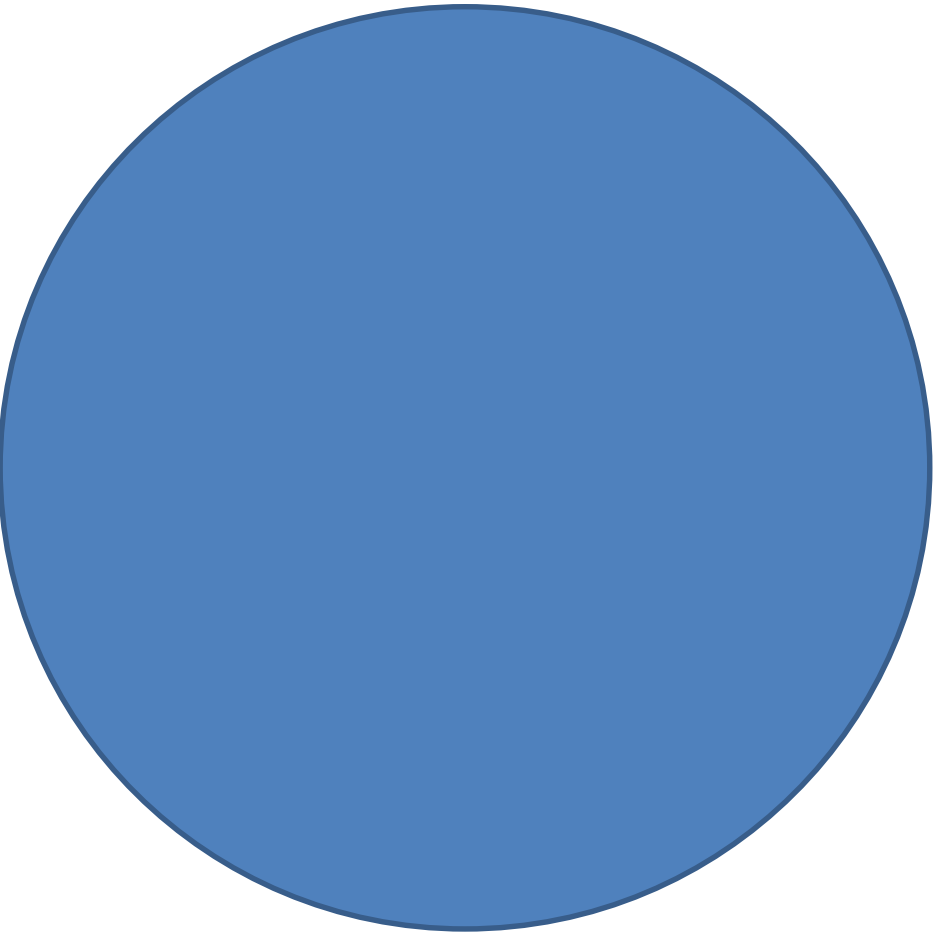

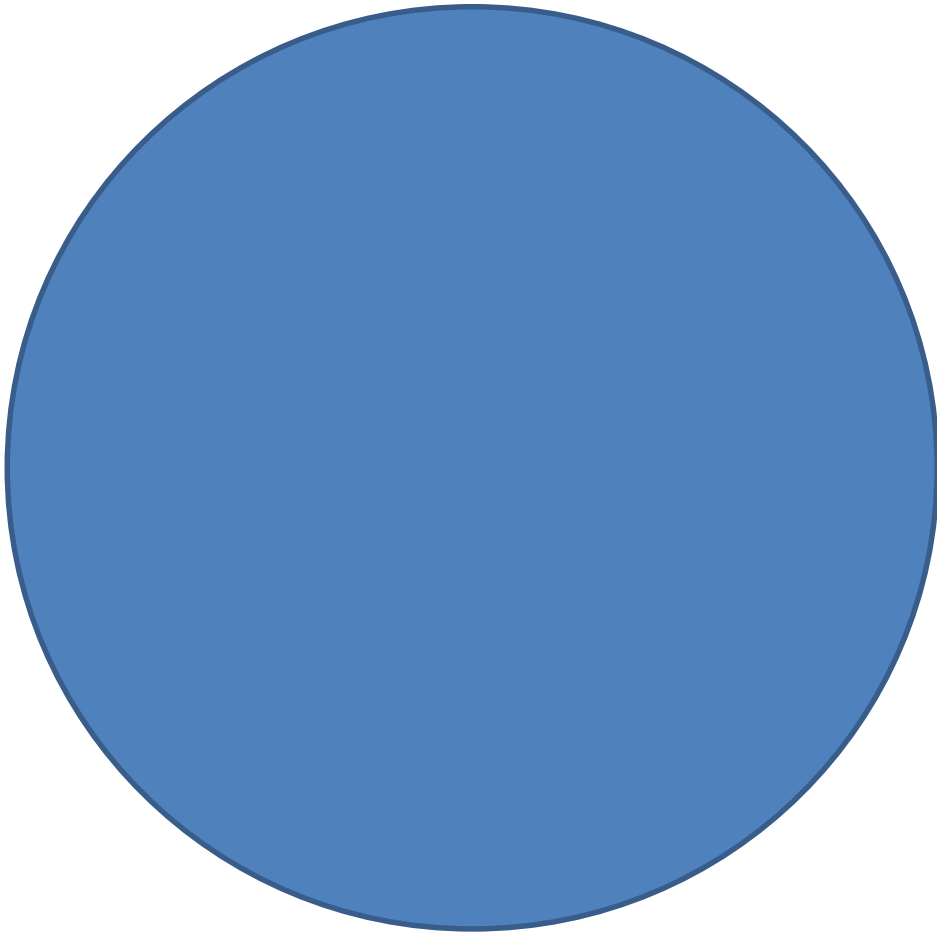

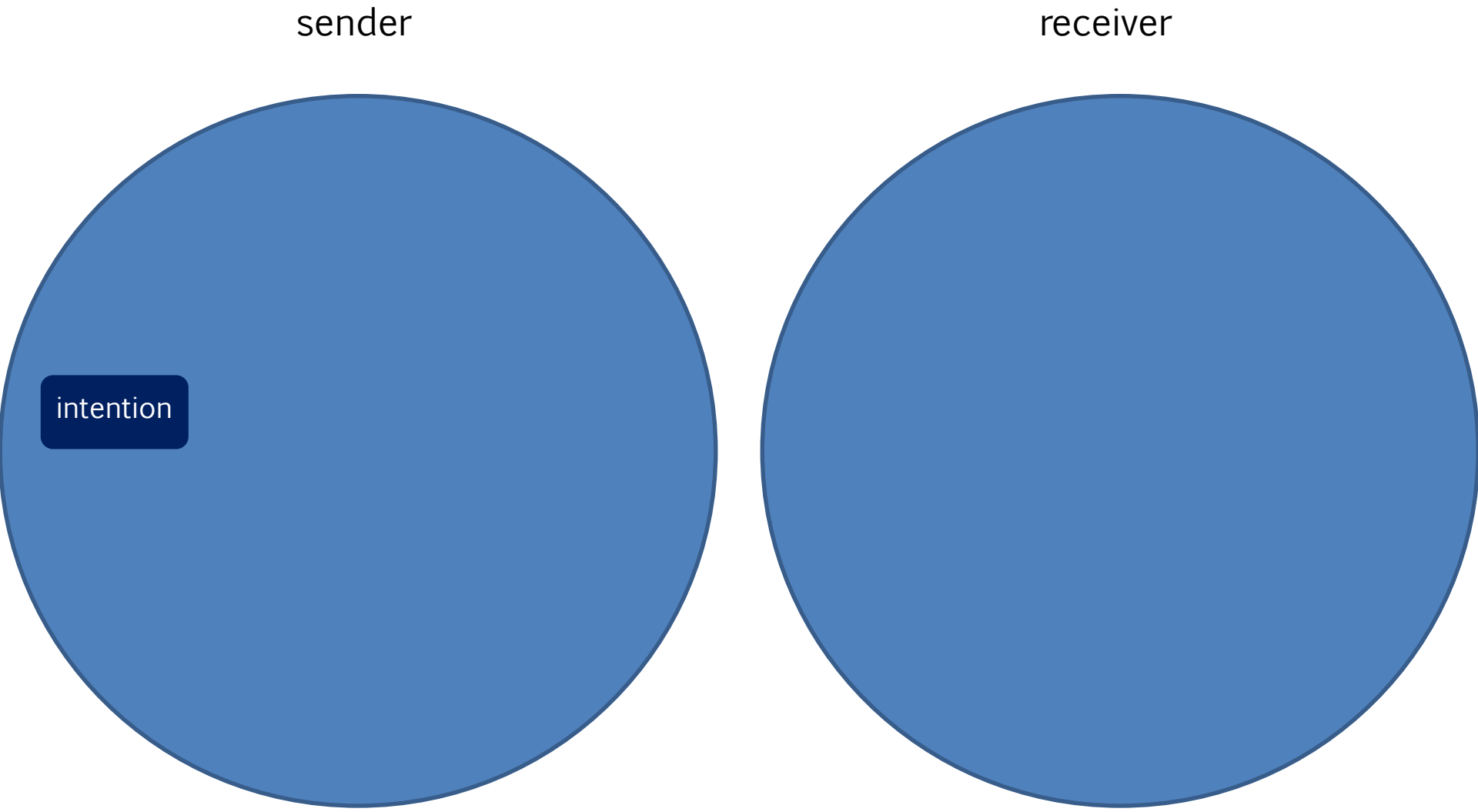
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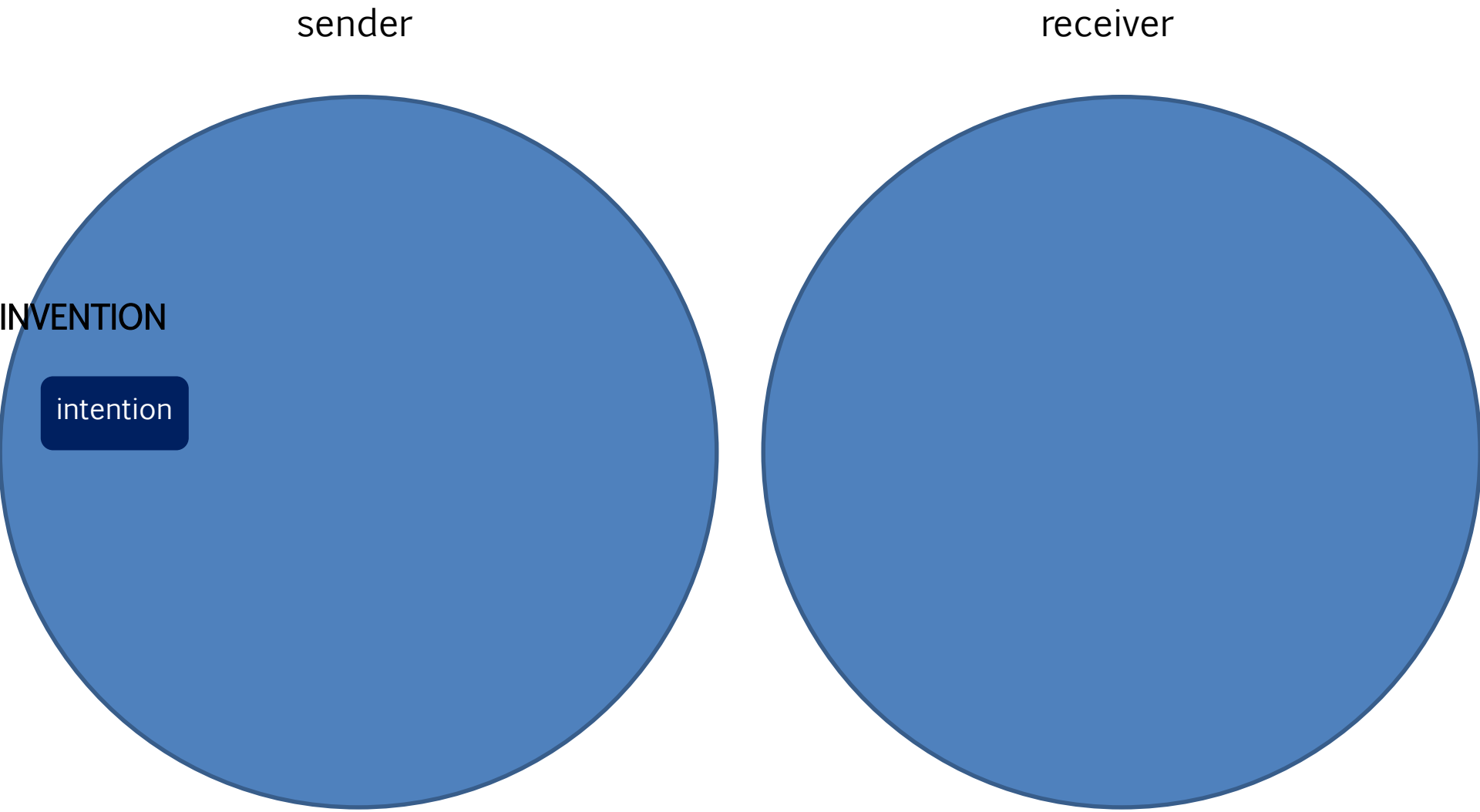
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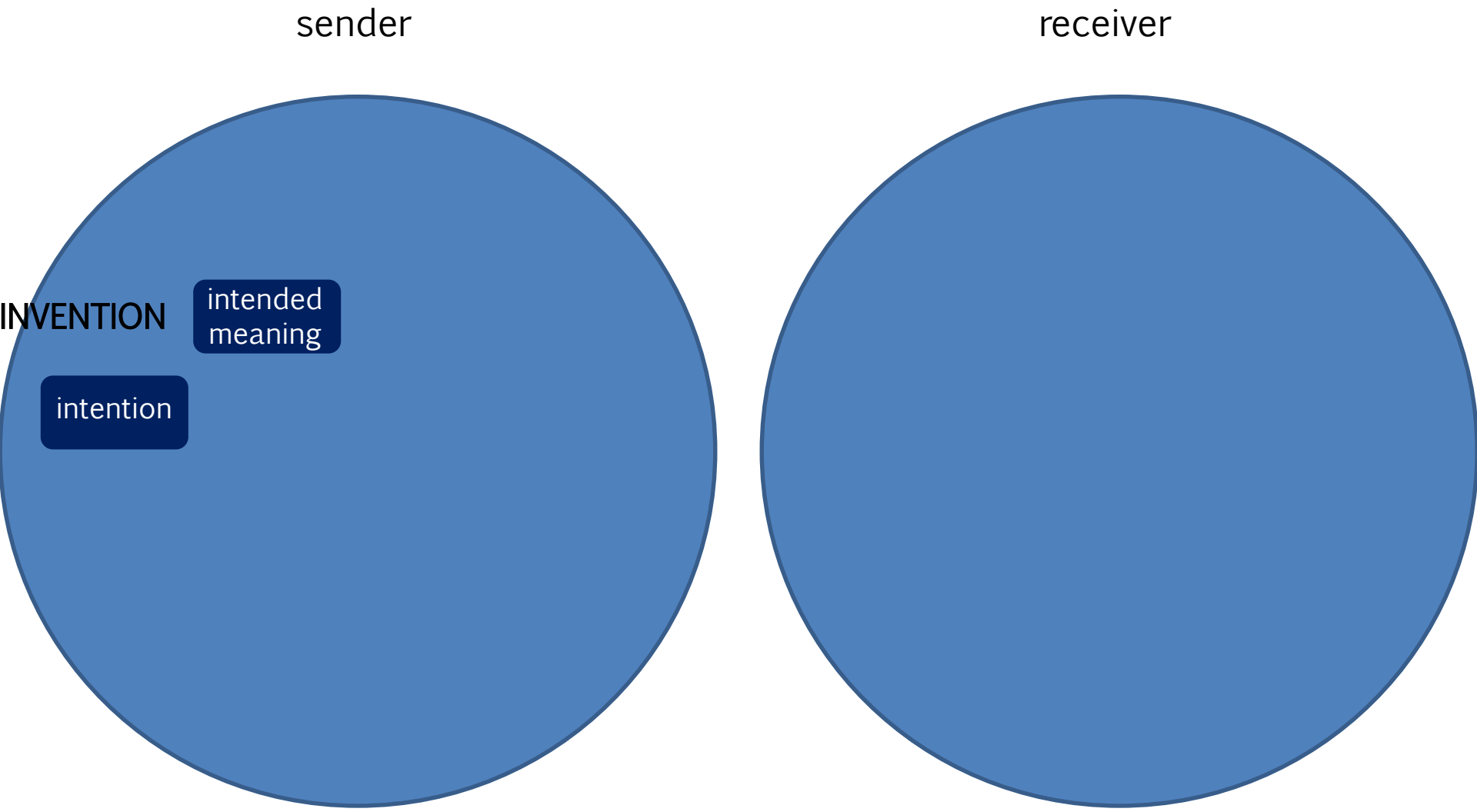
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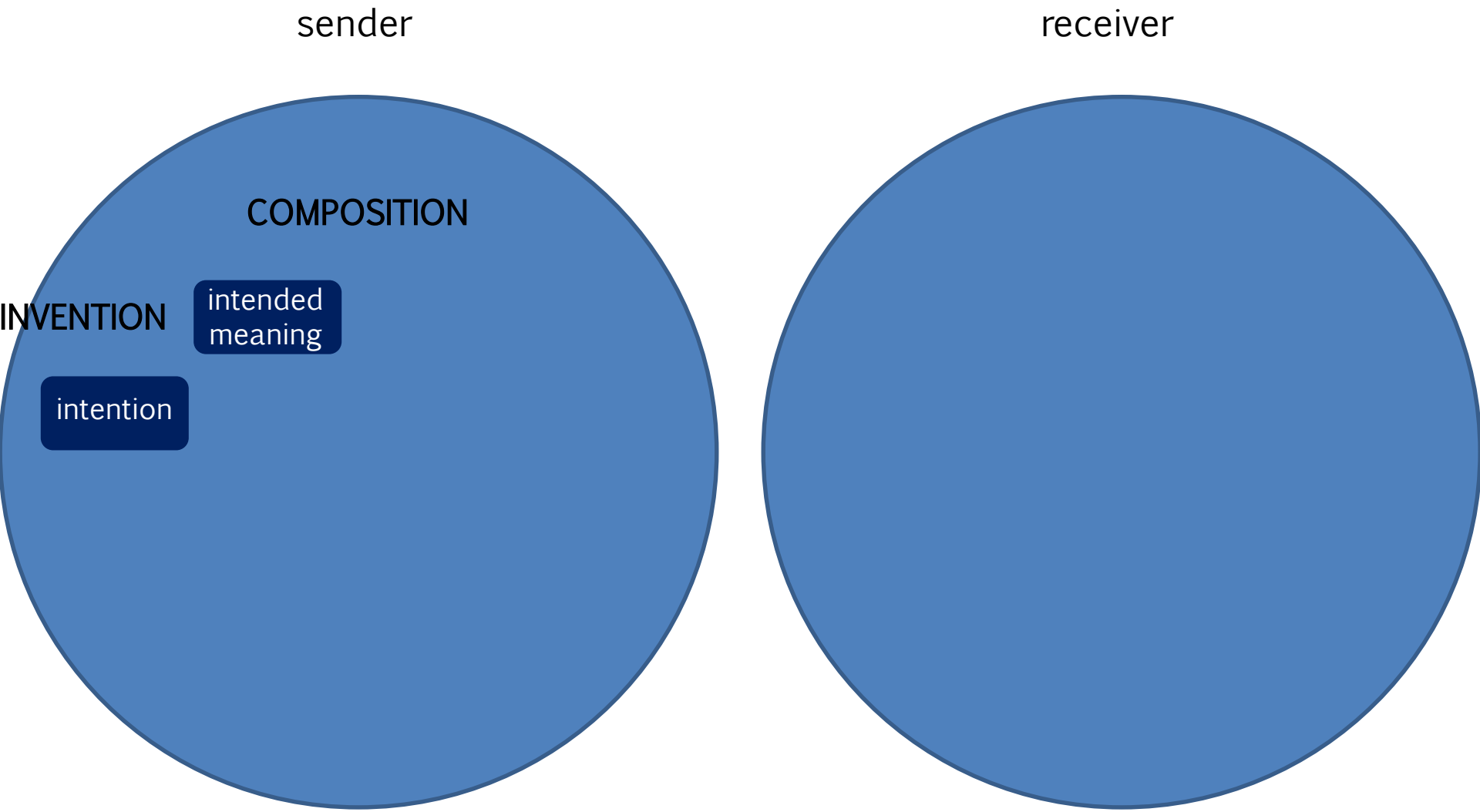
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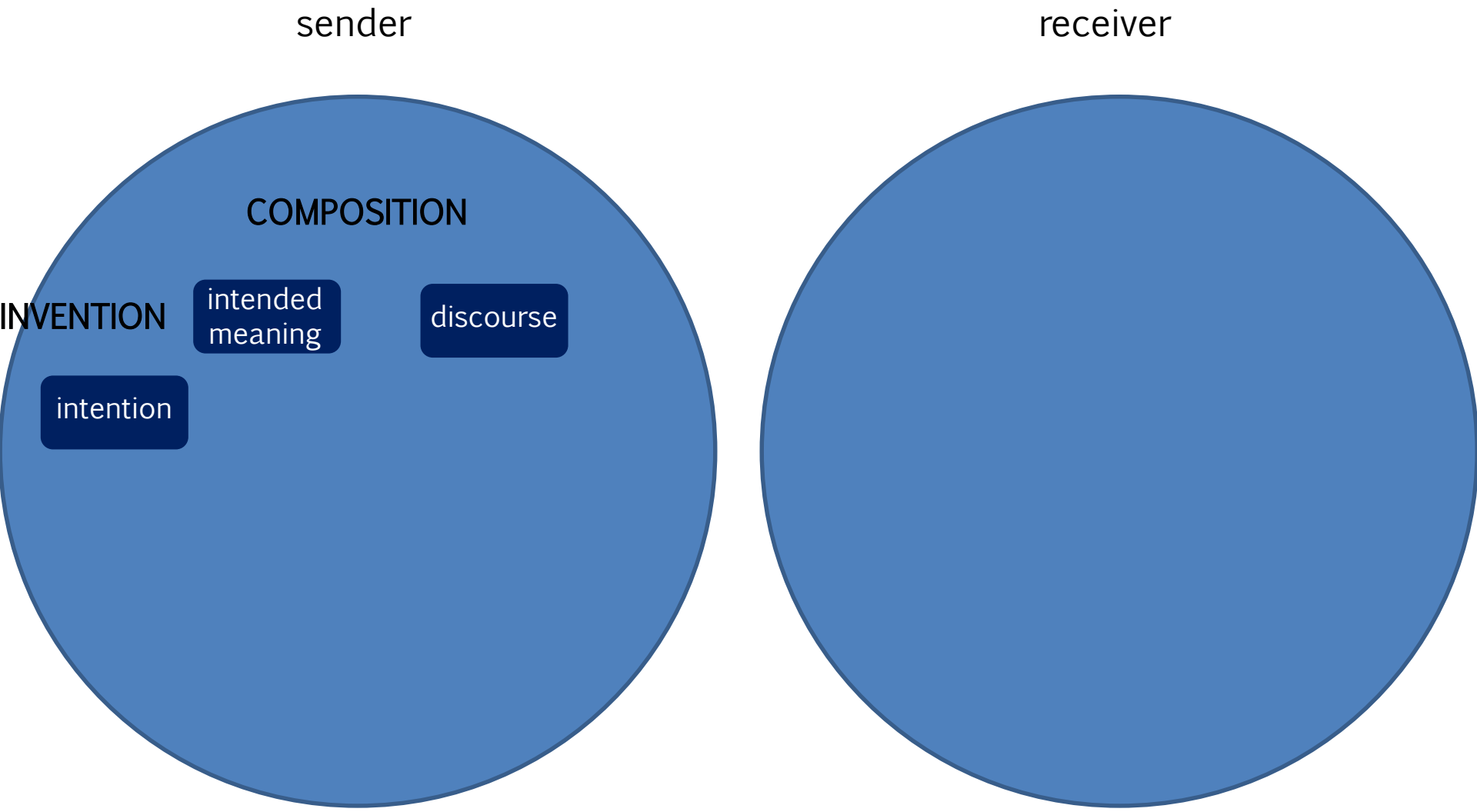
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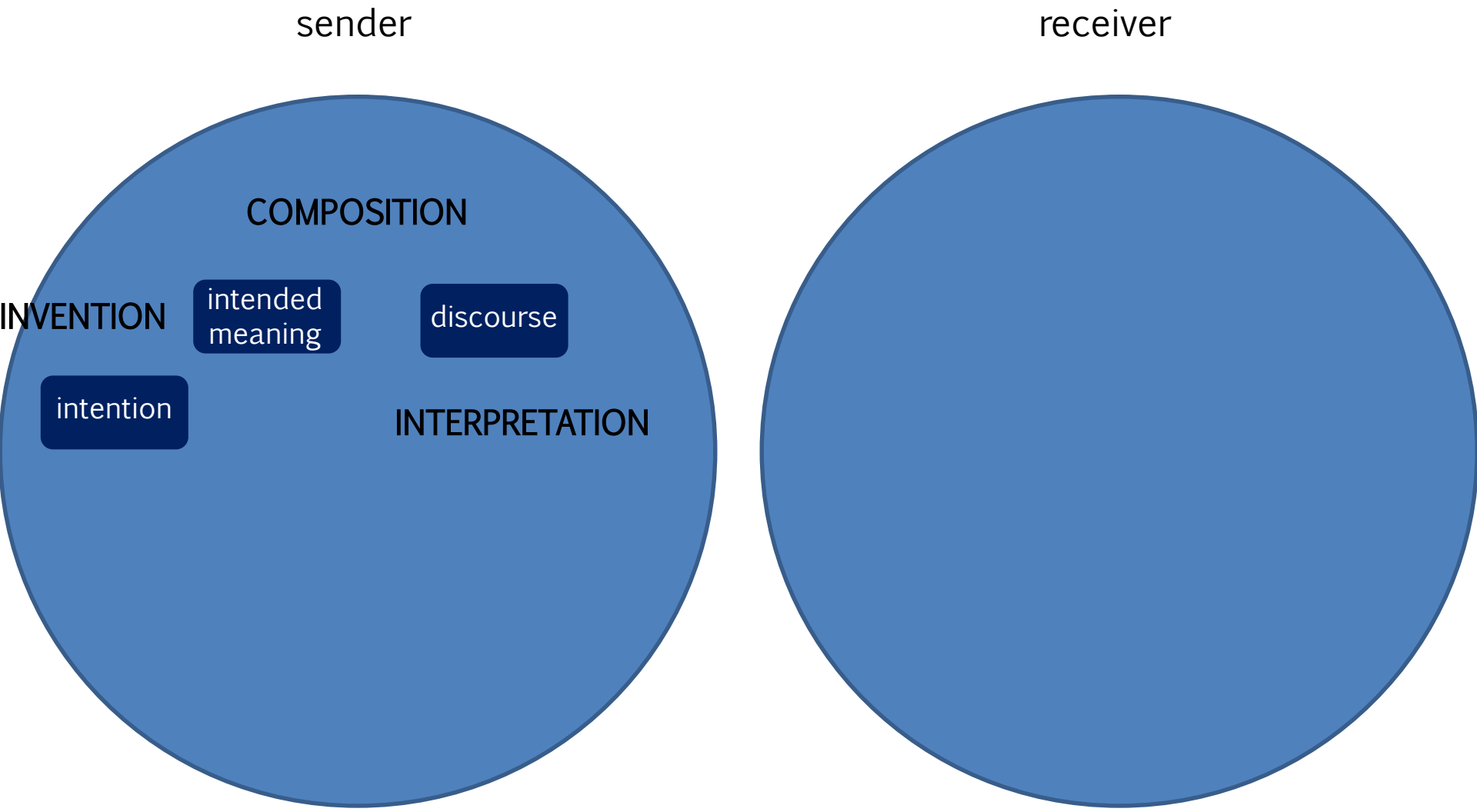
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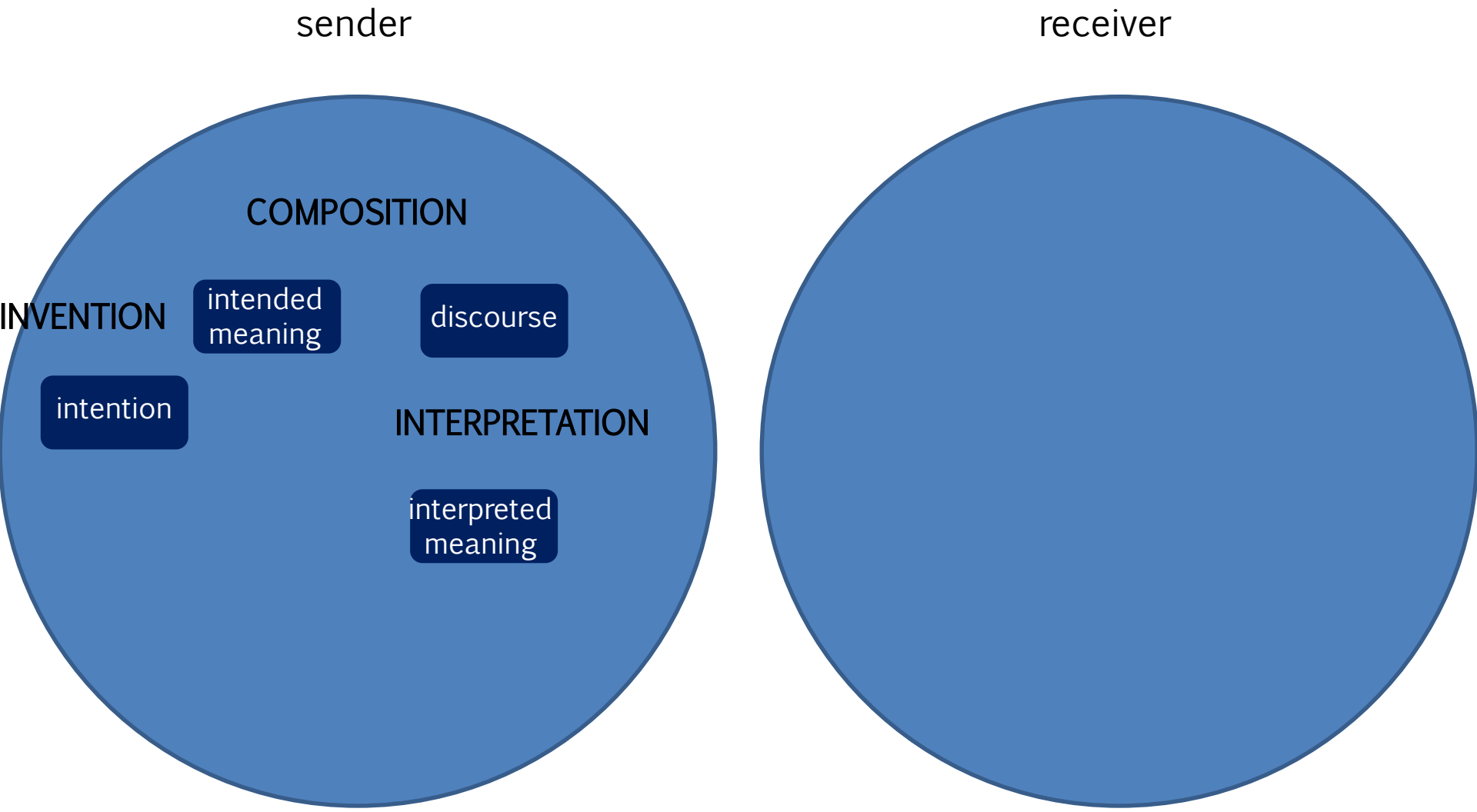
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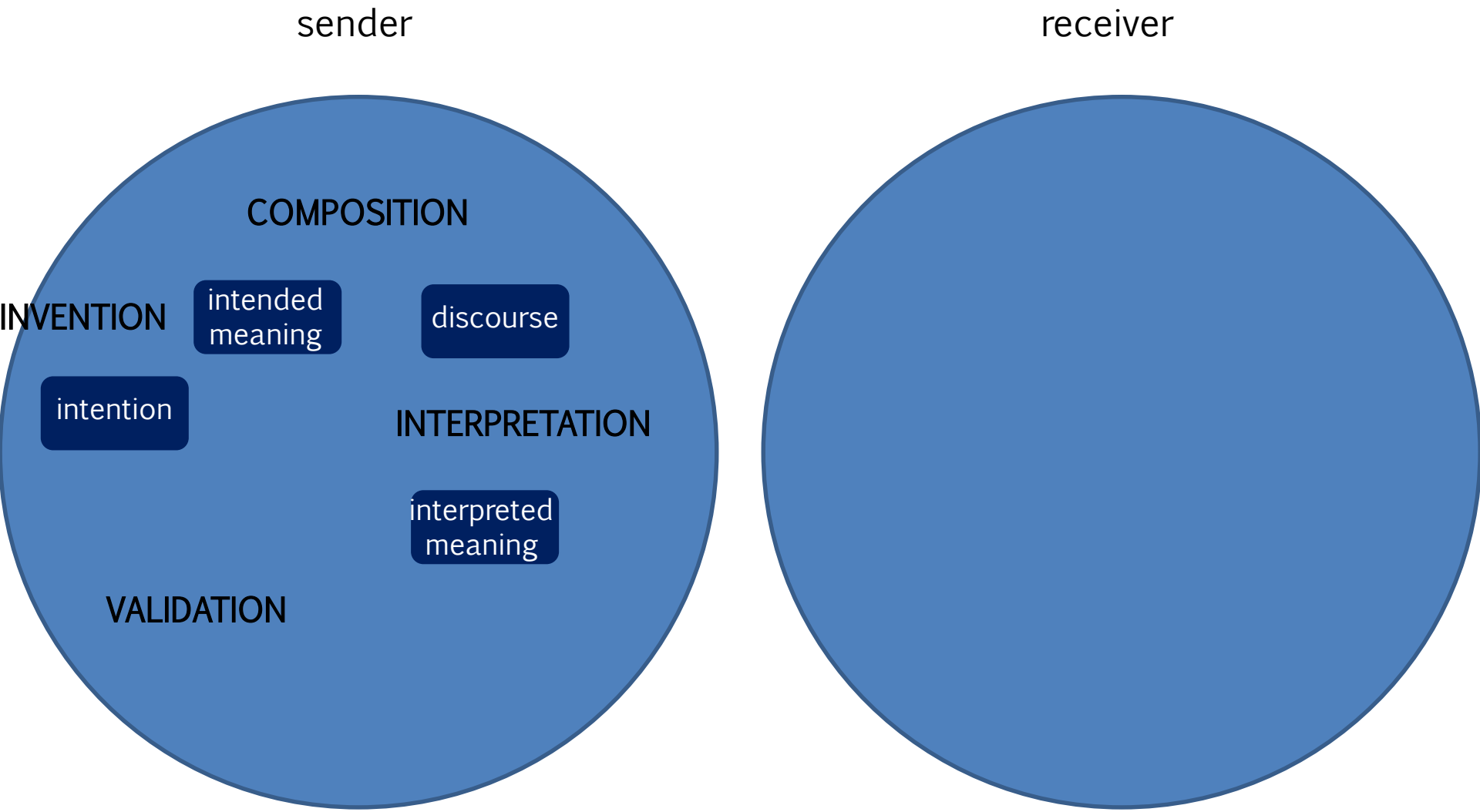
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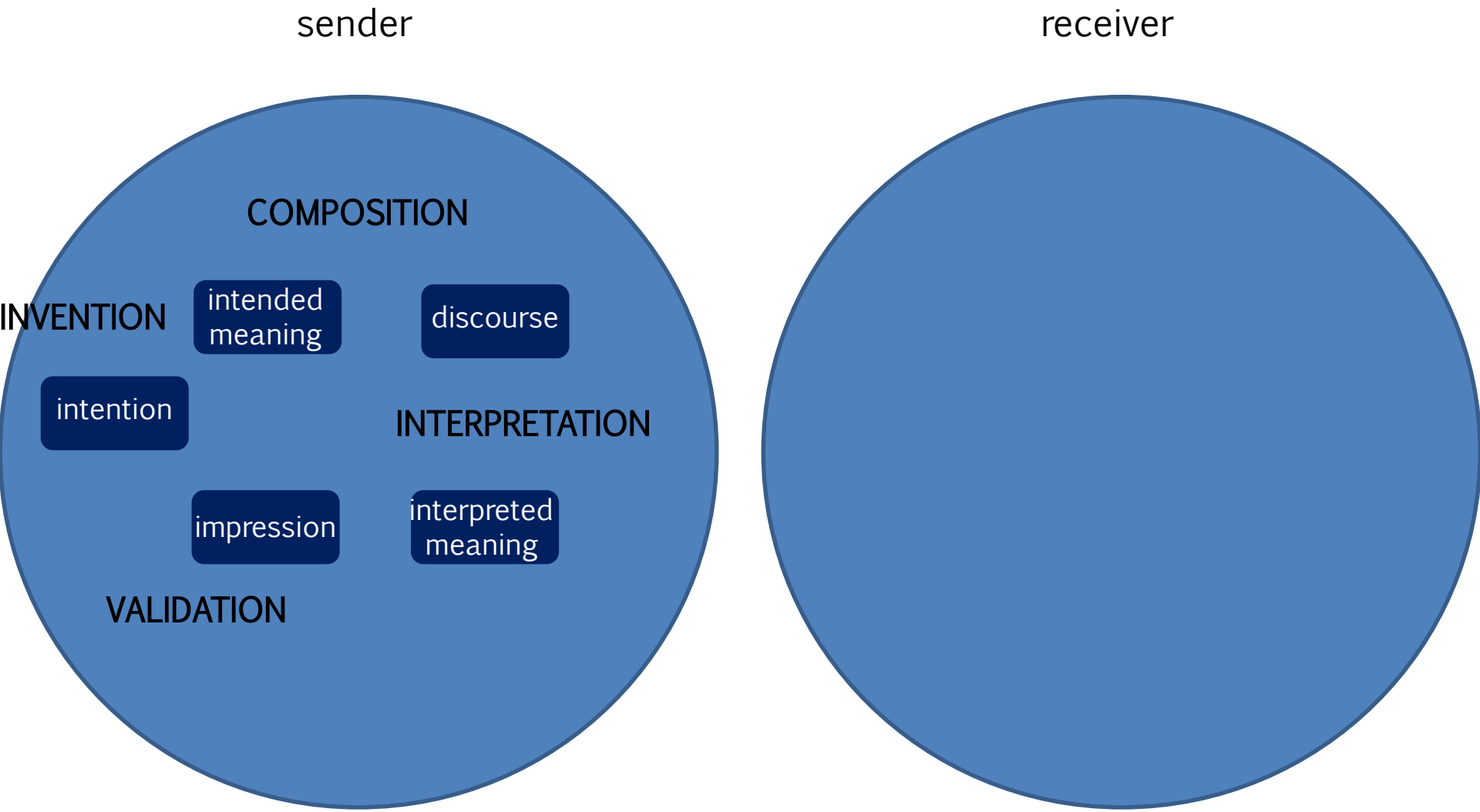
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intended meaning
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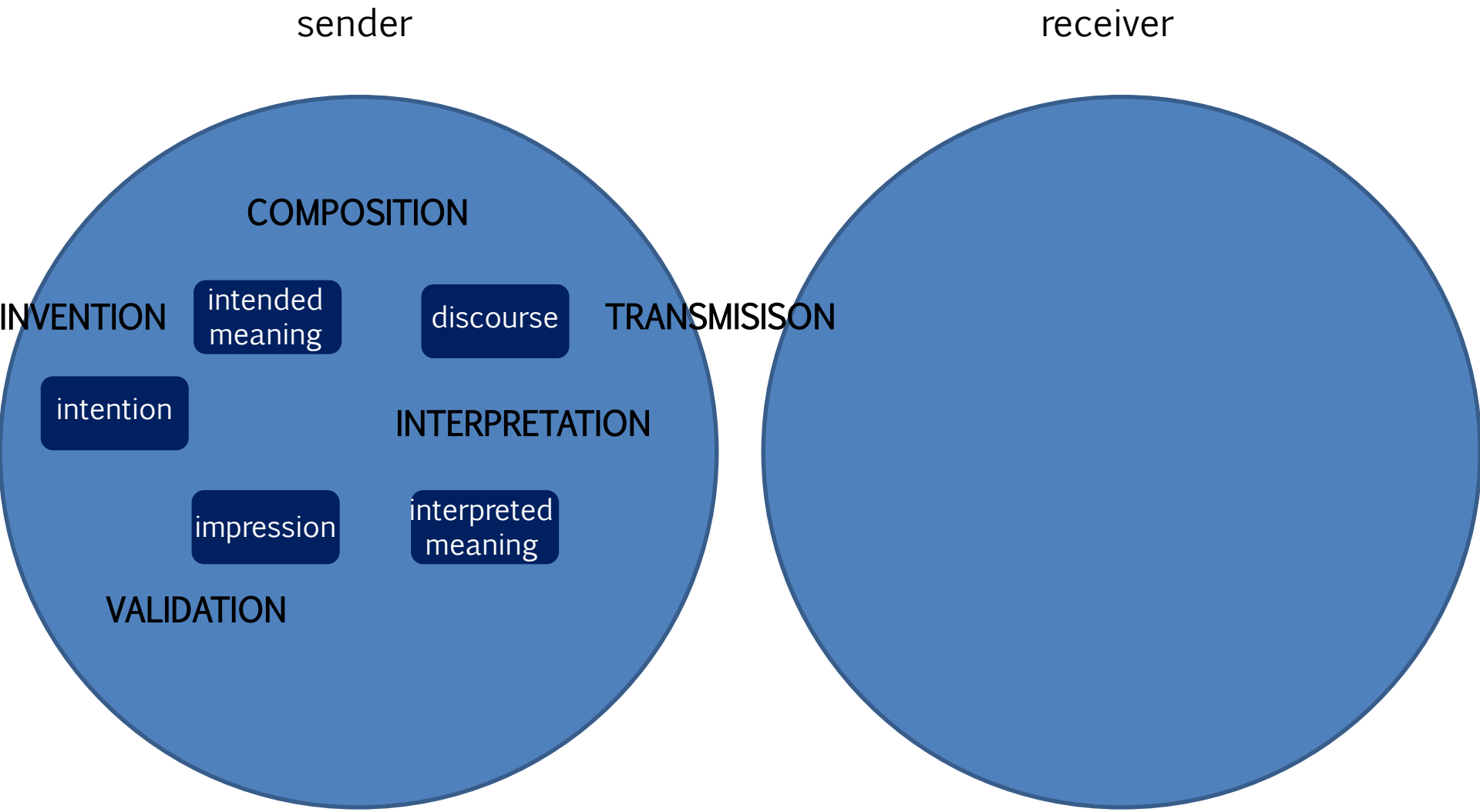
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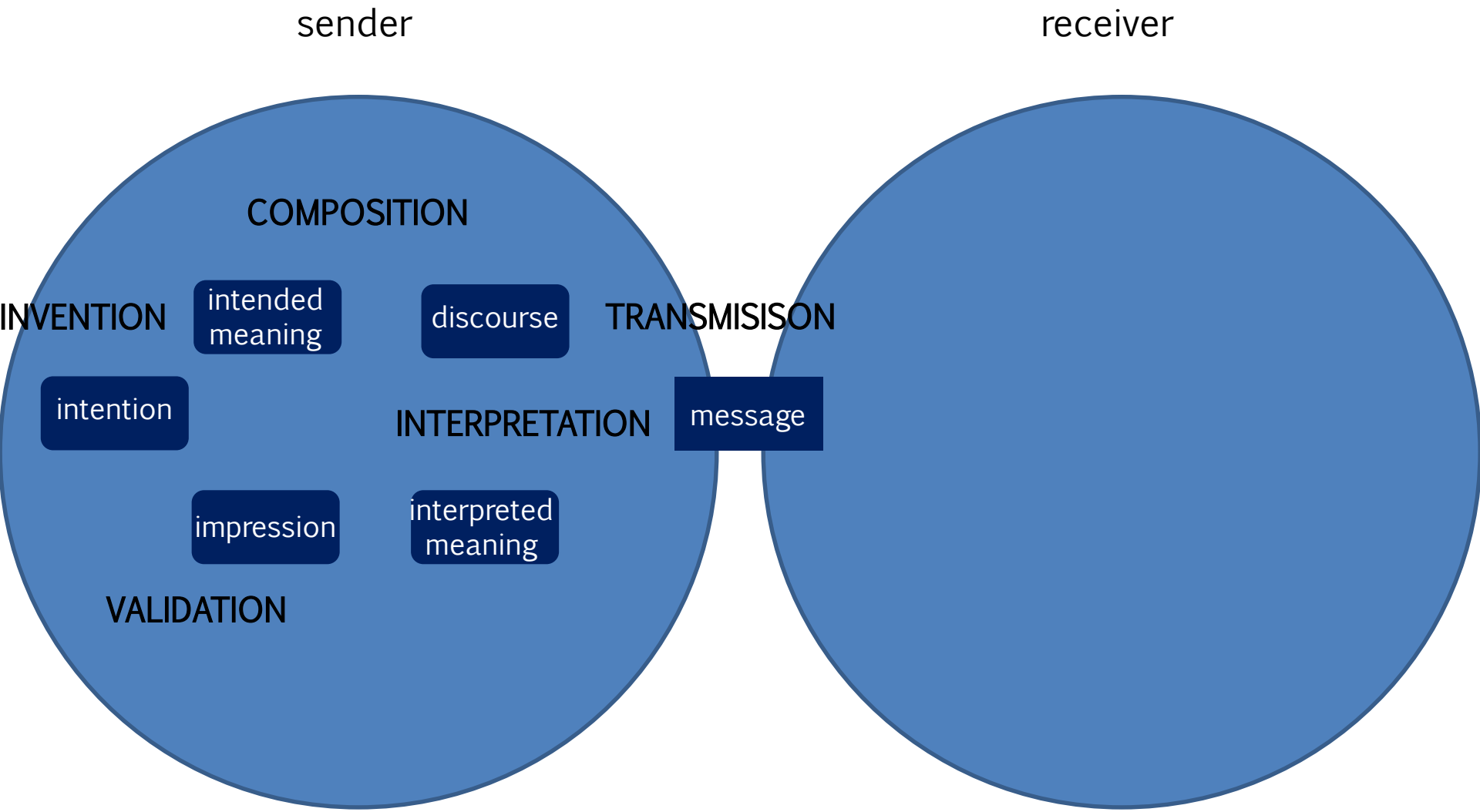
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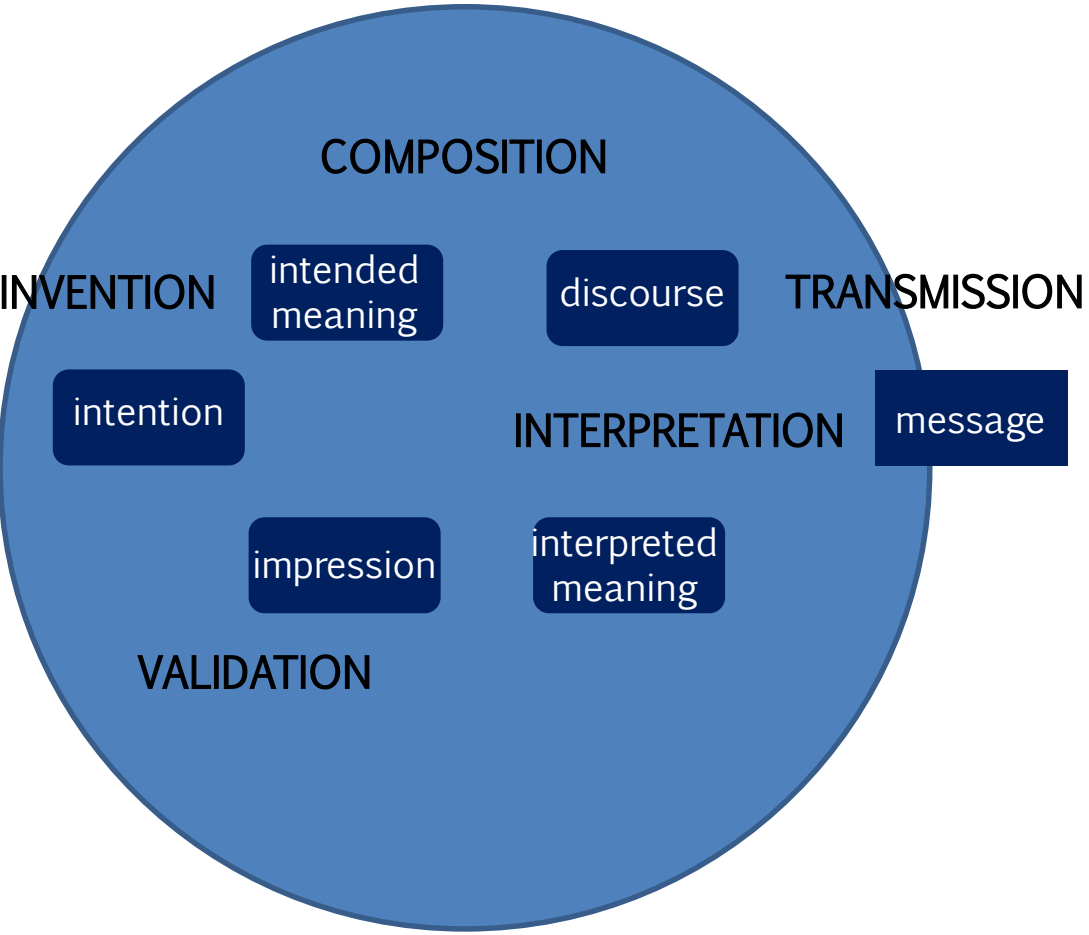


Invention

Composition

Transmission

Interpretation

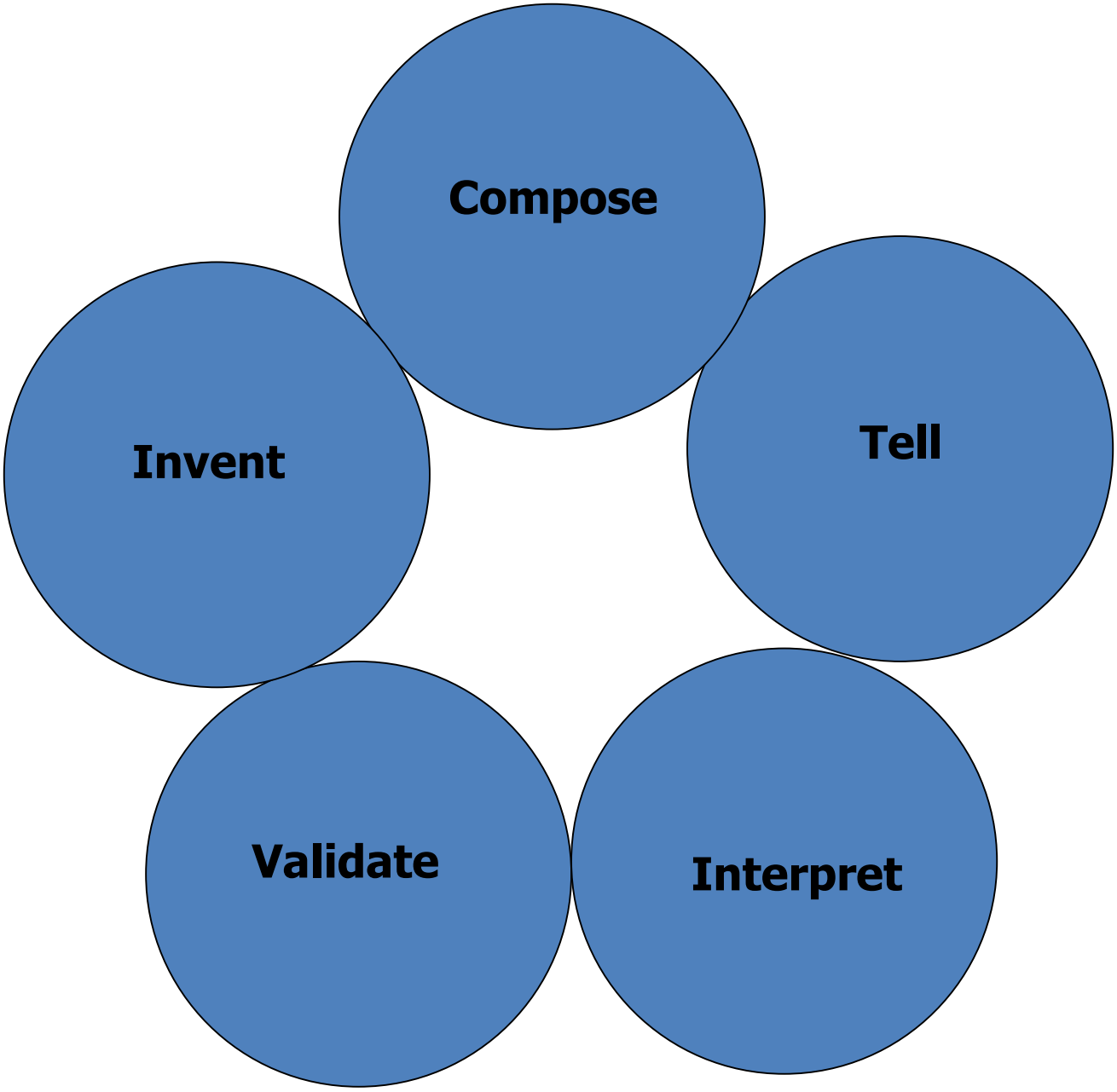
Validation

of

Stories

ICTIVS

Grounding the ICTIVS model


Compose
Invent
Tell
Validate
Interpret

(Pérez y Pérez, 1999)

MEXICA

(Pérez y Pérez, 1999)

MEXICA

Previous
Stories

Grounding ICTIVS

(Pérez y Pérez, 1999)

MEXICA

Previous Stories

Grounding ICTIVS

(Pérez y Pérez, 1999)

MEXICA

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Previous
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Grounding ICTIVS

(Pérez y Pérez, 1999)

MEXICA

Story Contexts

Previous Stories

(Pérez y Pérez, 1999)

MEXICA

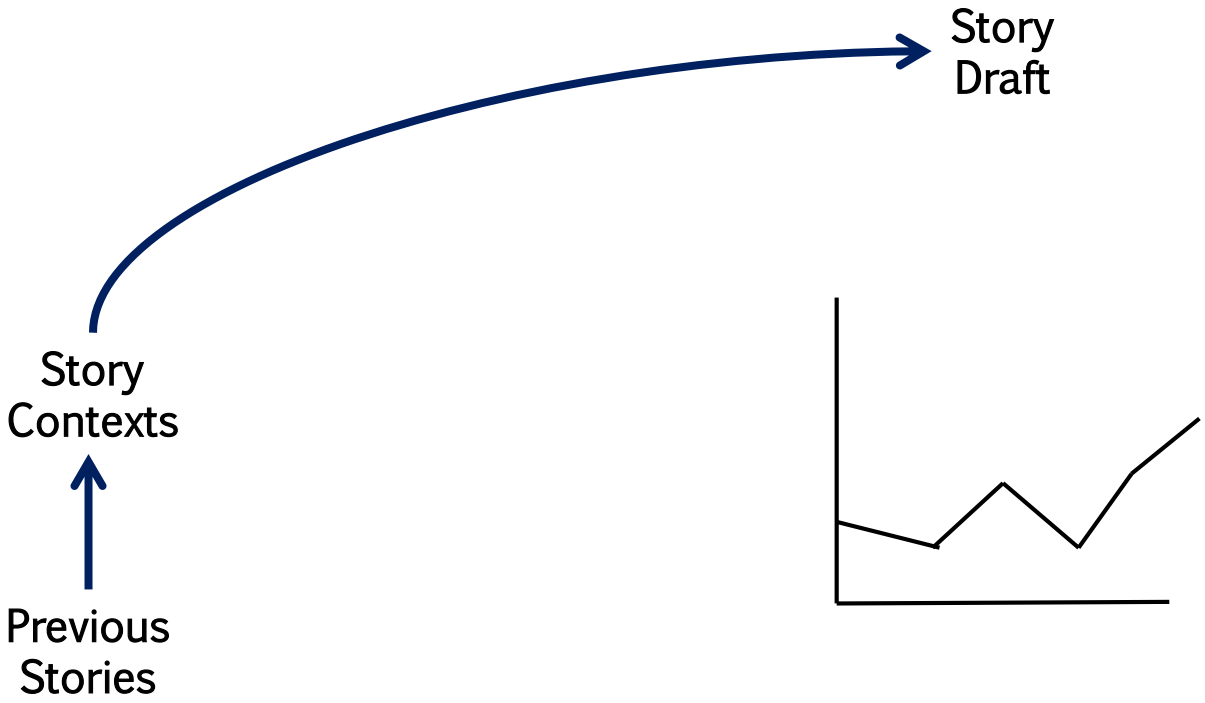
Story Contexts

Story Draft

Previous Stories

(Pérez y Pérez, 1999)

MEXICA



(Pérez y Pérez, 1999)

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Story
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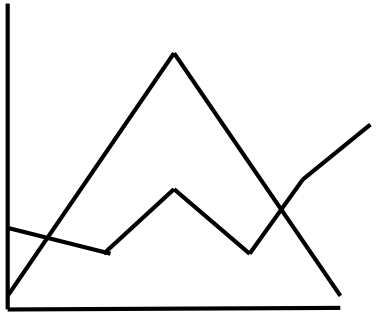

(Pérez y Pérez, 1999)

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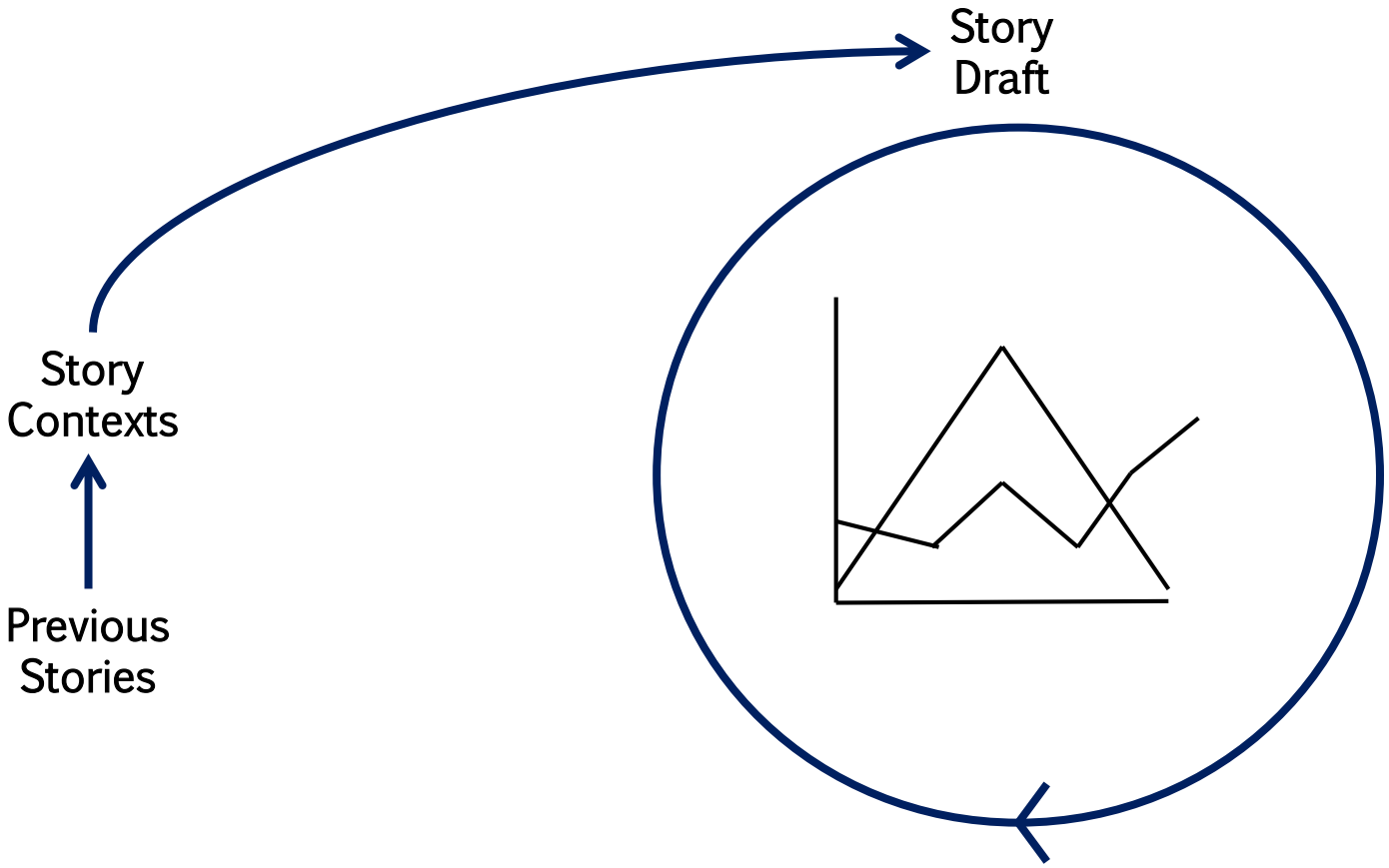

Grounding ICTIVS

(Pérez y Pérez, 1999)

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Story
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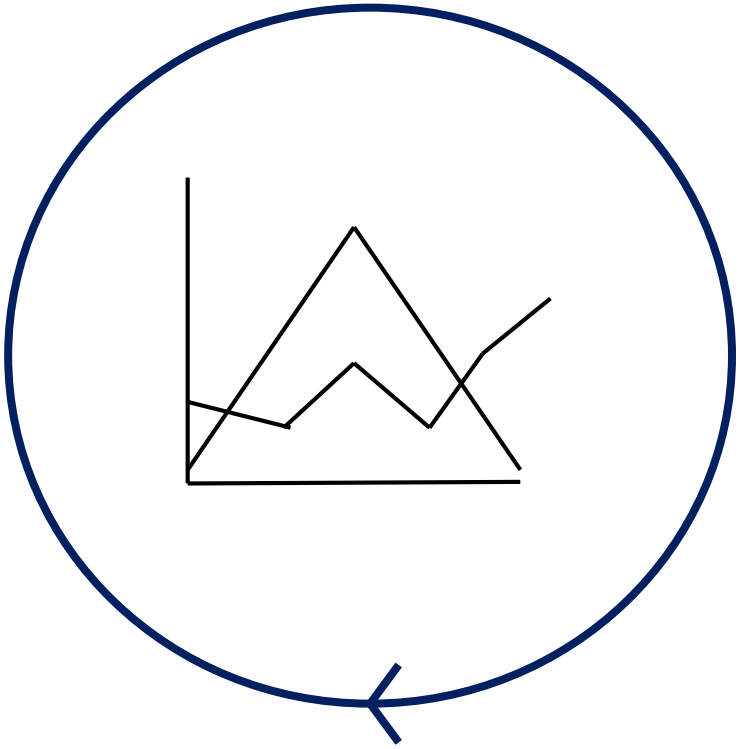

Grounding ICTIVS

(Pérez y Pérez, 1999)

MEXICA

Story Contexts

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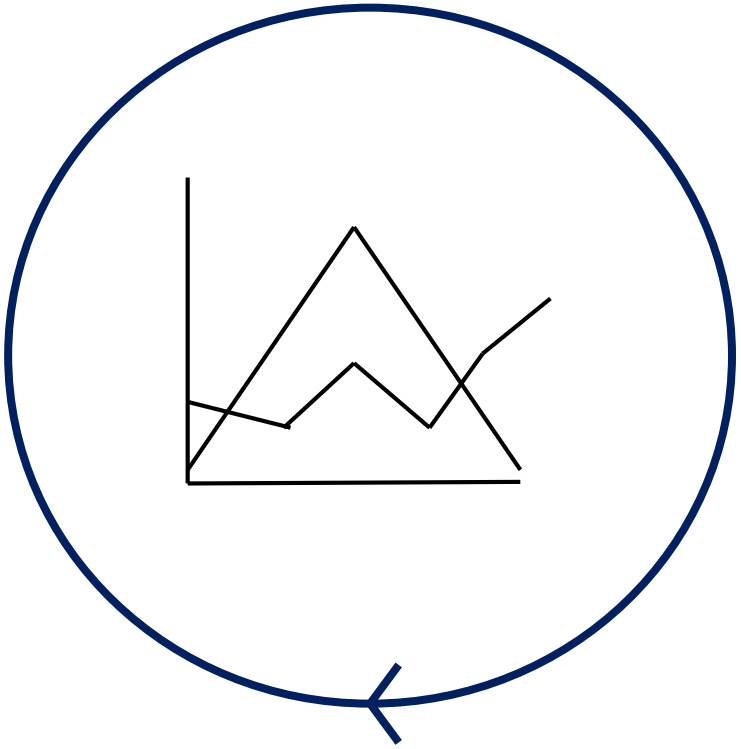

Grounding ICTIVS

(Pérez y Pérez, 1999)

MEXICA

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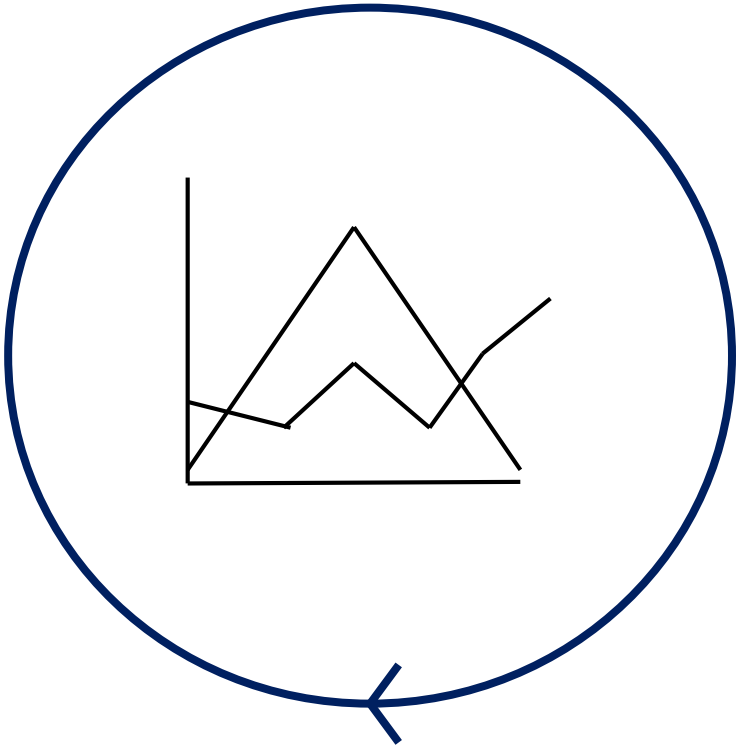

Grounding ICTIVS

(Pérez y Pérez, 1999)

MEXICA

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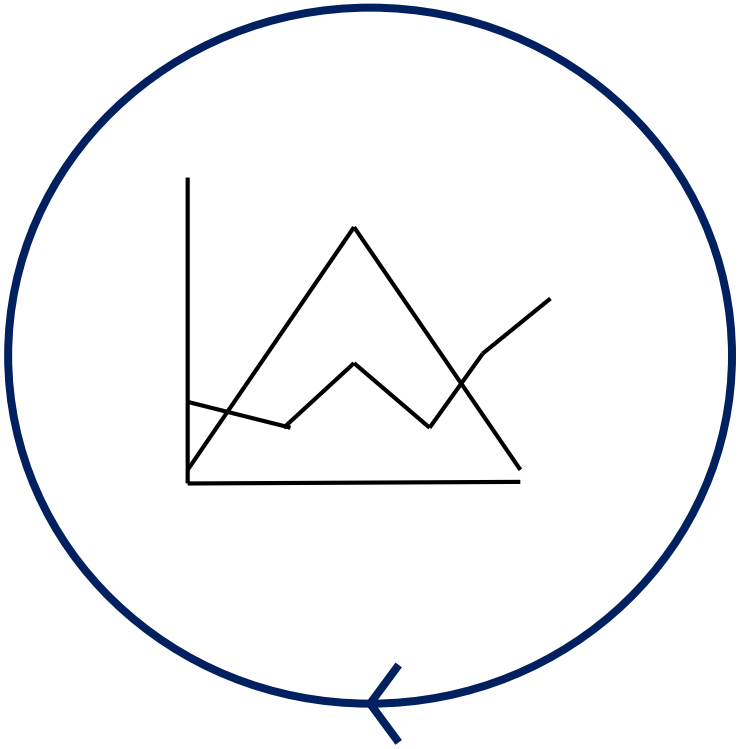

Grounding ICTIVS

(Pérez y Pérez, 1999)

MEXICA

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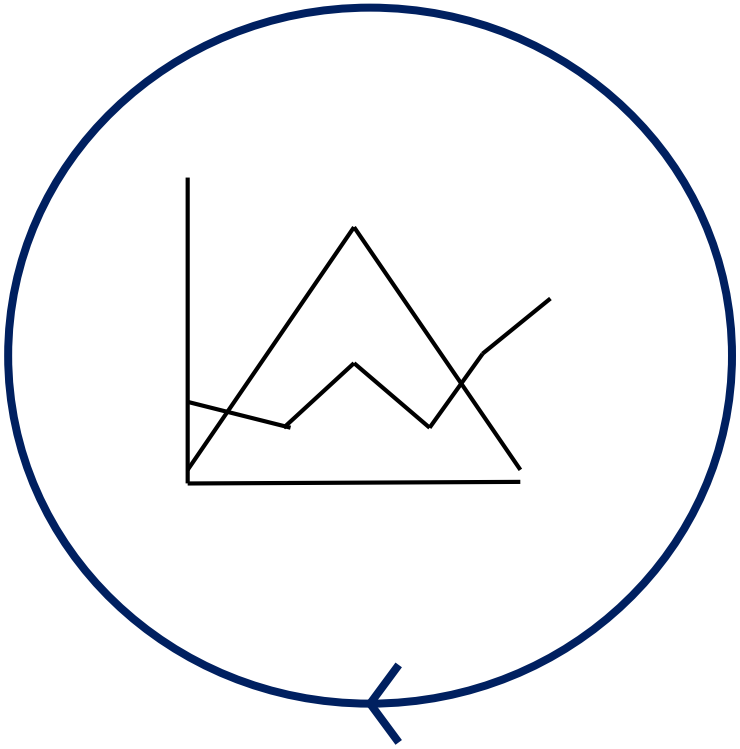

Grounding ICTIVS

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MEXICA

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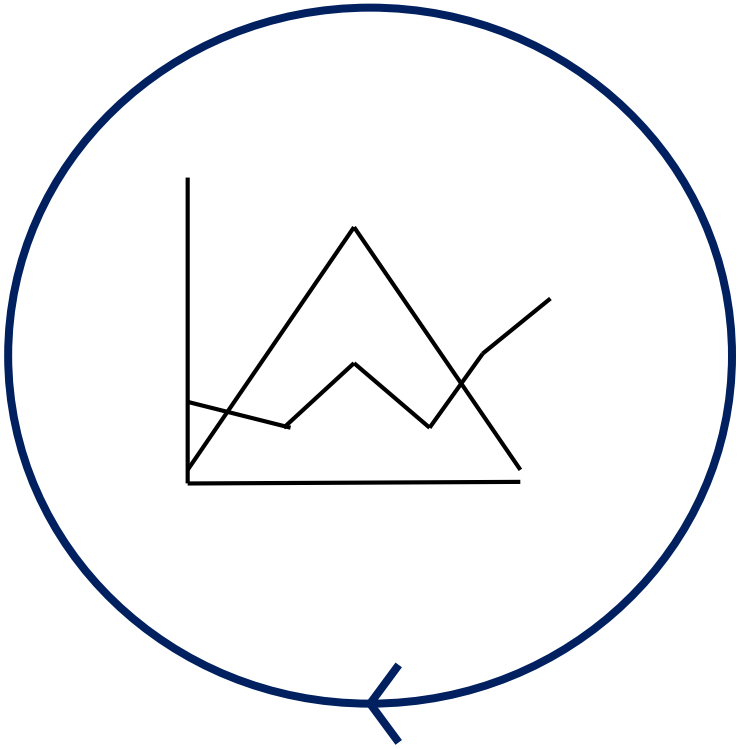

Grounding ICTIVS

(Pérez y Pérez, 1999)

MEXICA

INVENTION/COMPOSITION

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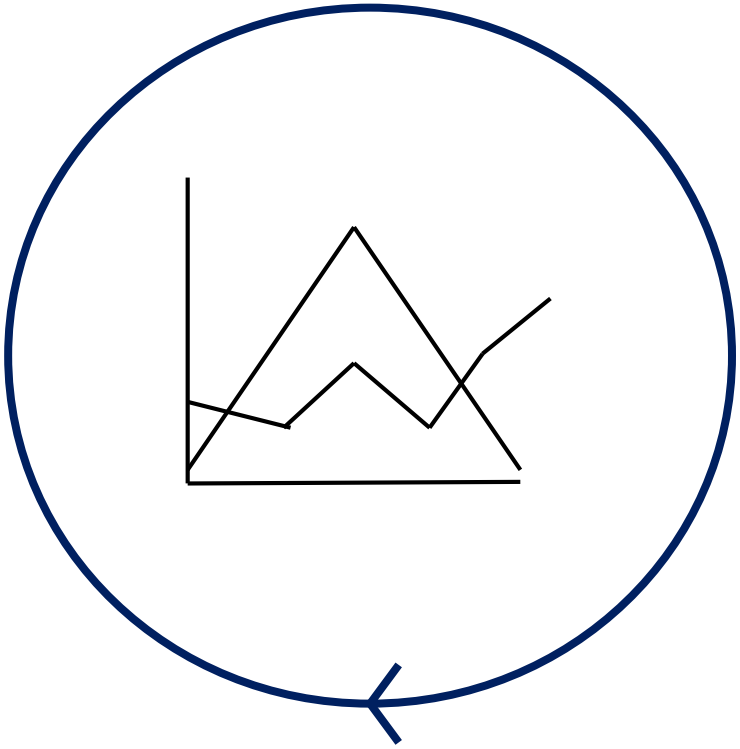

Grounding ICTIVS

(Pérez y Pérez, 1999)

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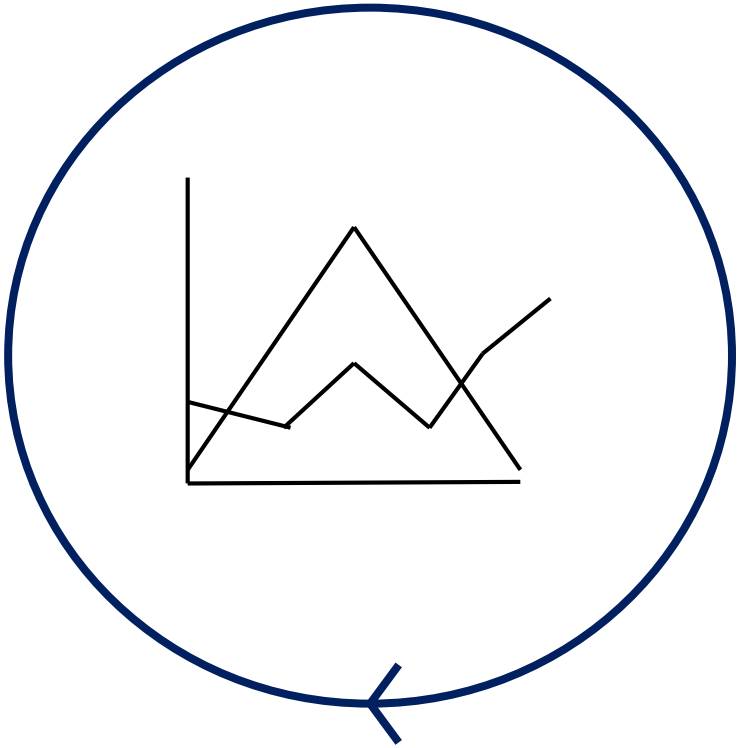

Grounding ICTIVS

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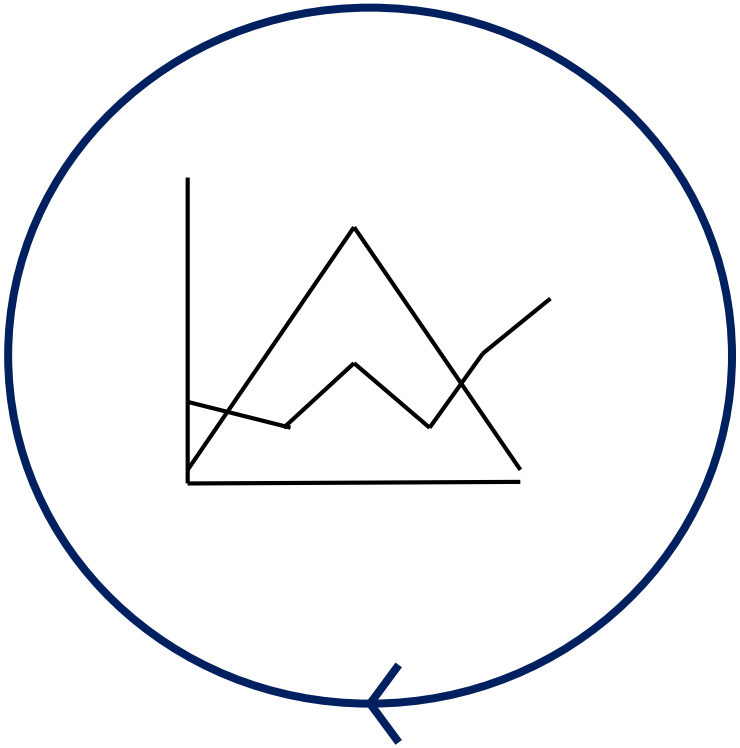

Grounding ICTIVS

(Pérez y Pérez, 1999)

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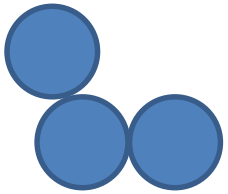

discourse

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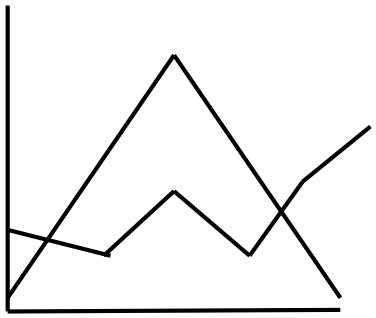

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Grounding ICTIVS

(Pérez y Pérez, 1999)

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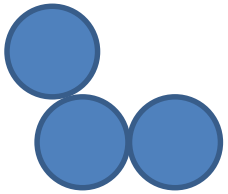

discourse

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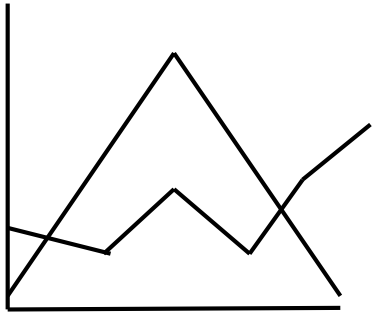

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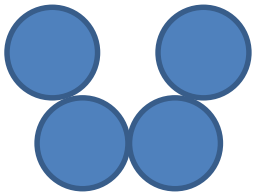

discourse

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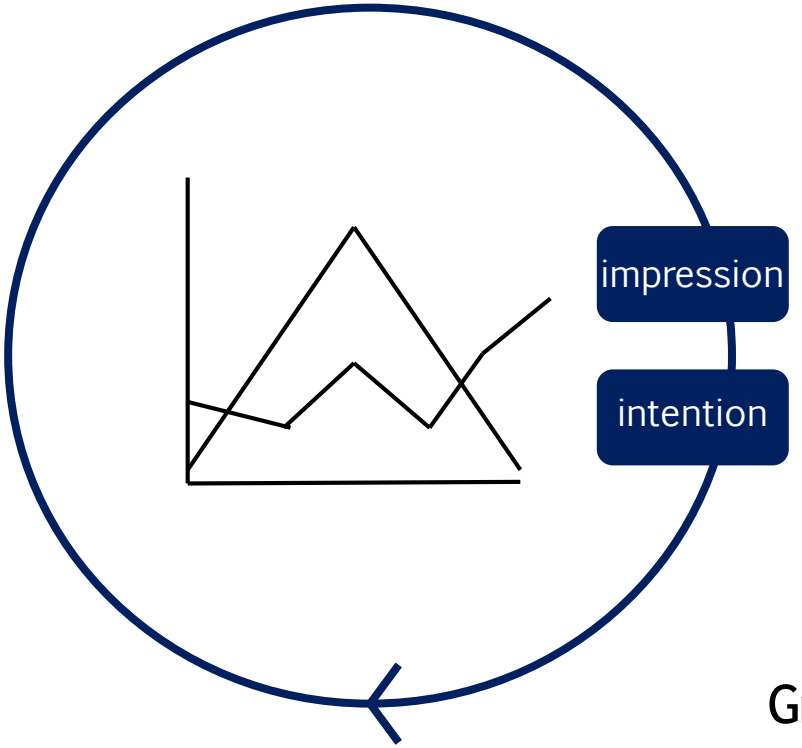

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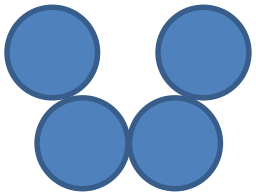

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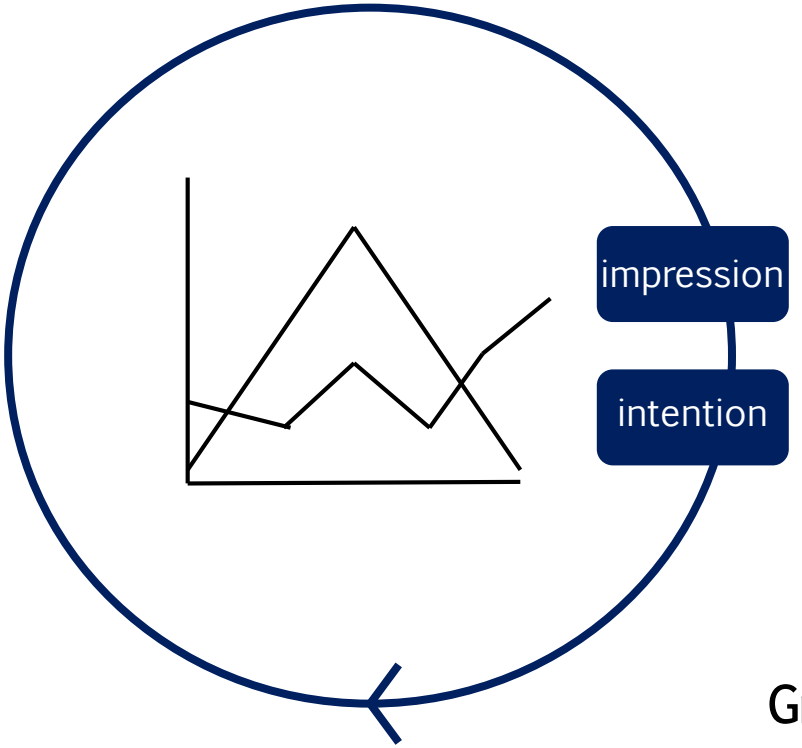

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(Pérez y Pérez, 1999)

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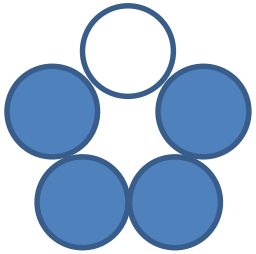

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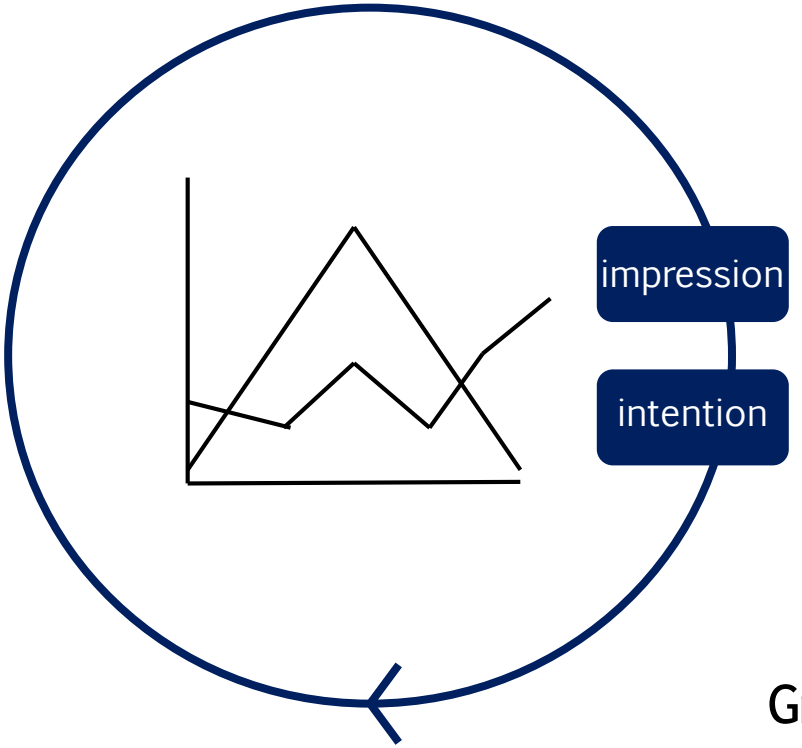
Story Contexts

interpreted meaning



VALIDATION

INTERPRETATION

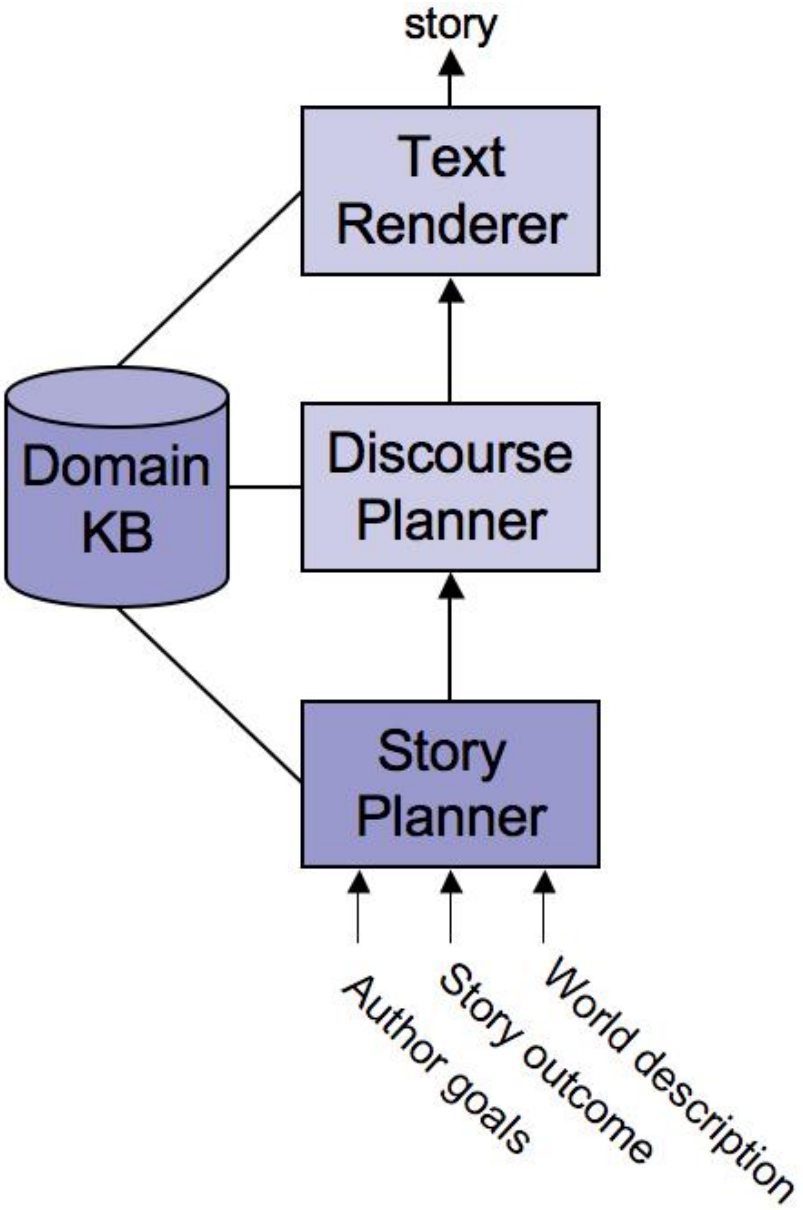
Previous Stories

message

Grounding ICTIVS

(Riedl, 2004)

FABULIST



Grounding ICTIVS

(Riedl, 2004)

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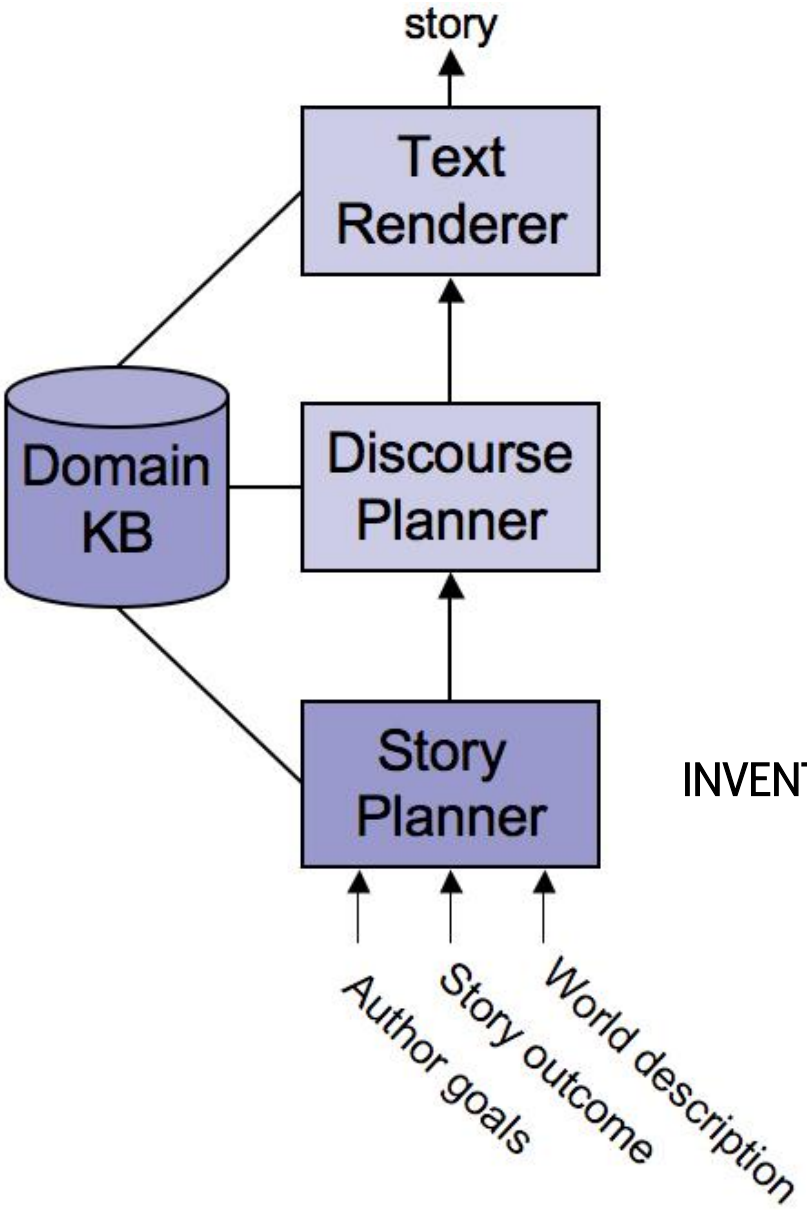

INVENTION

Grounding ICTIVS

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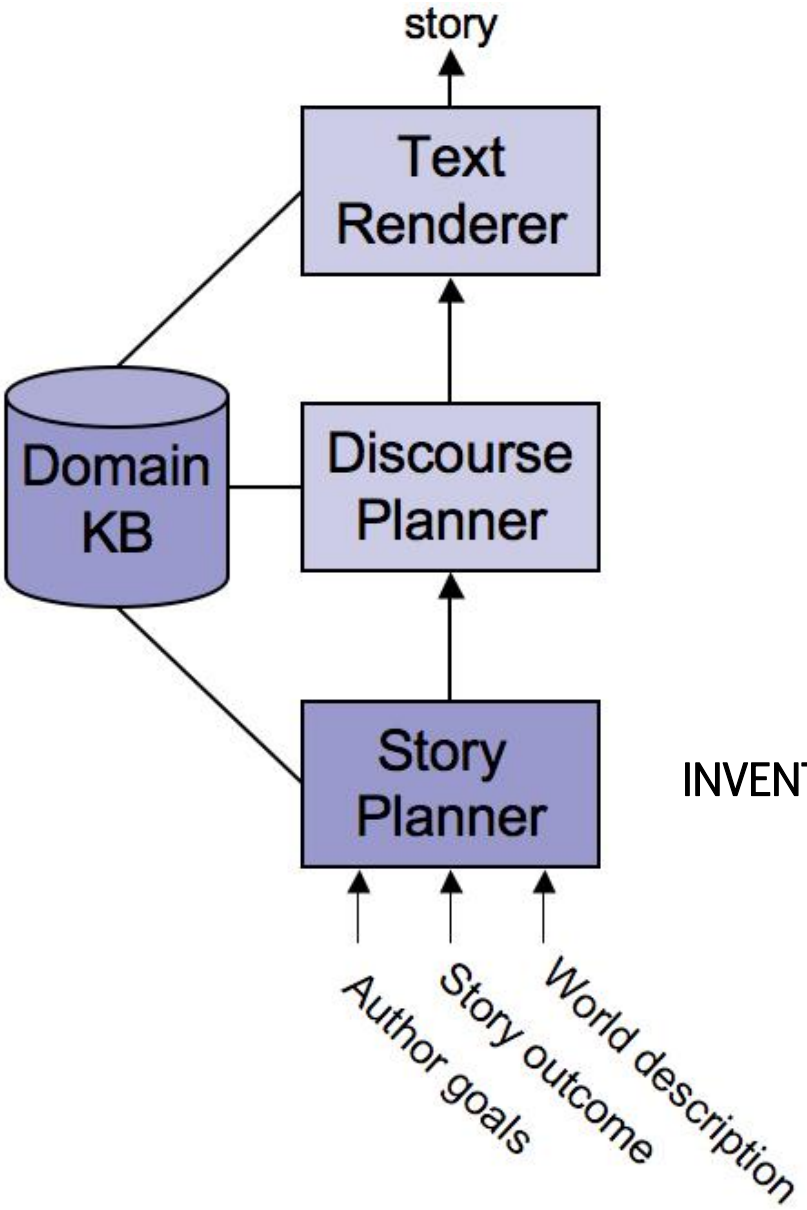

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Grounding ICTIVS

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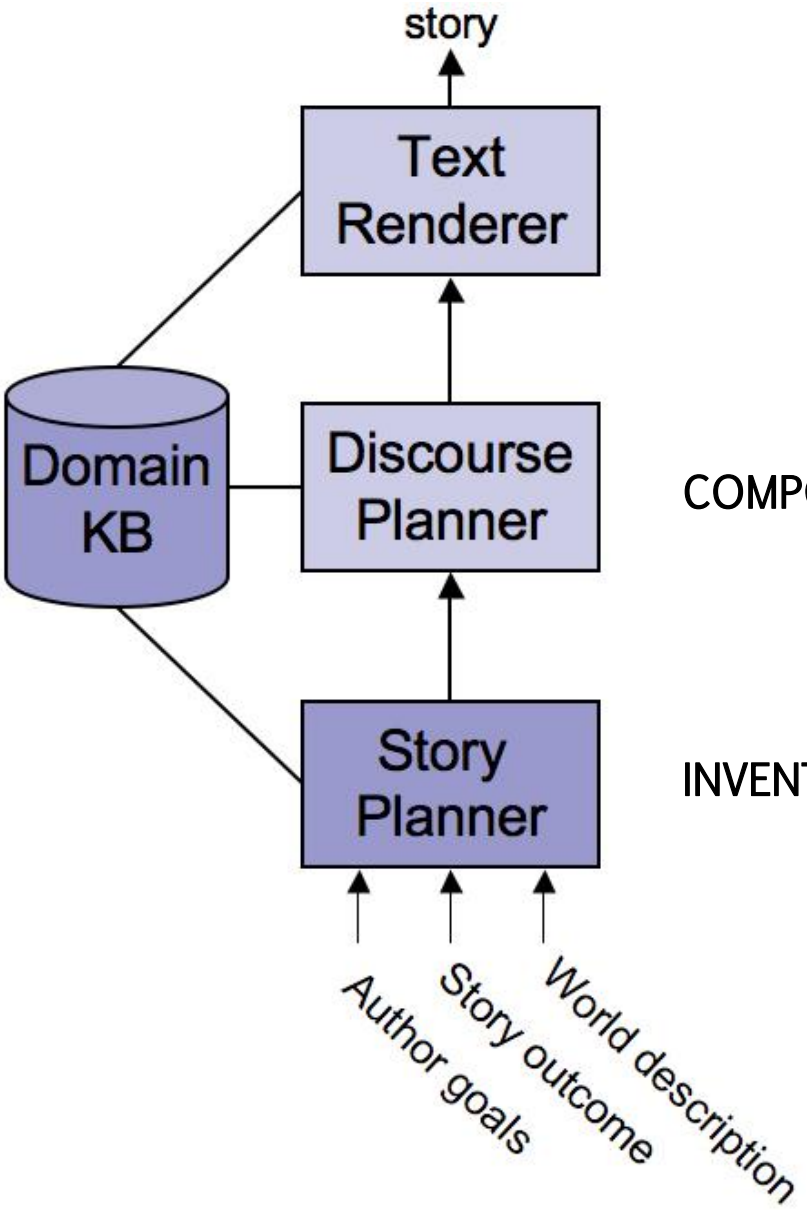

COMPOSITION

INVENTION

Grounding ICTIVS

(Riedl, 2004)

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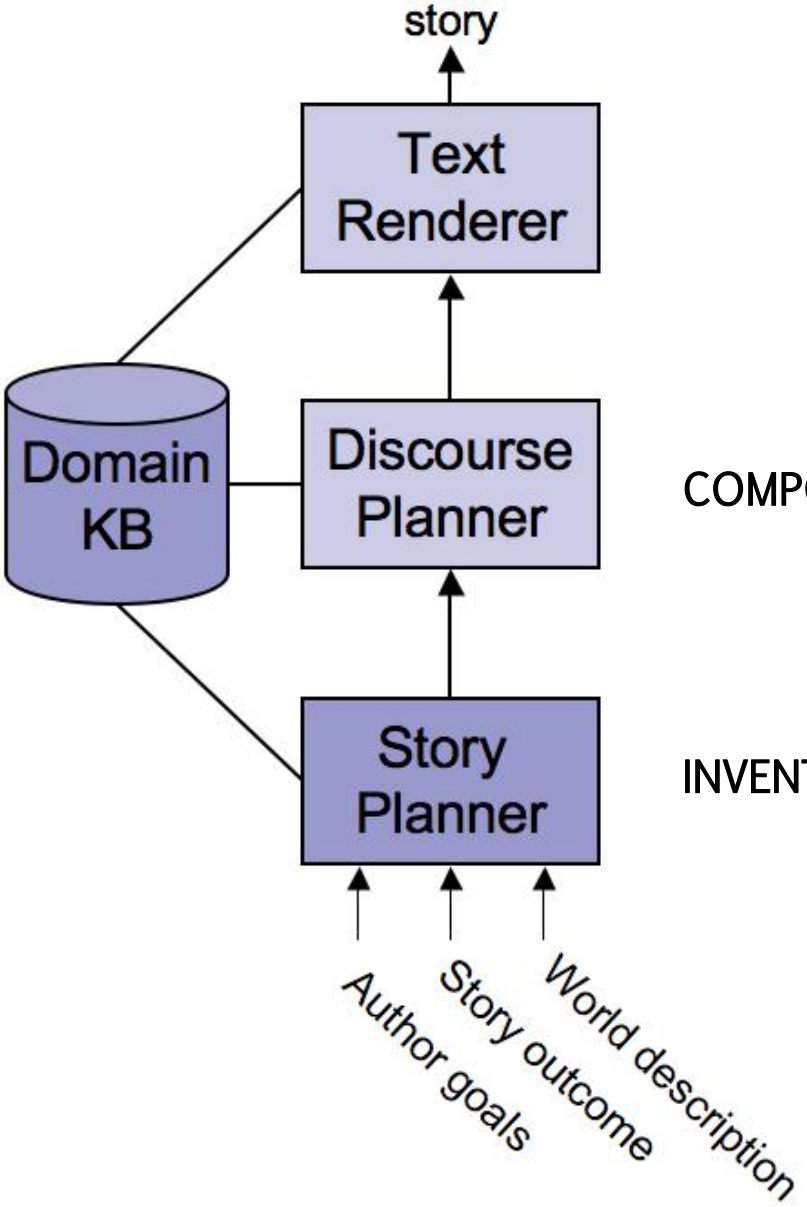

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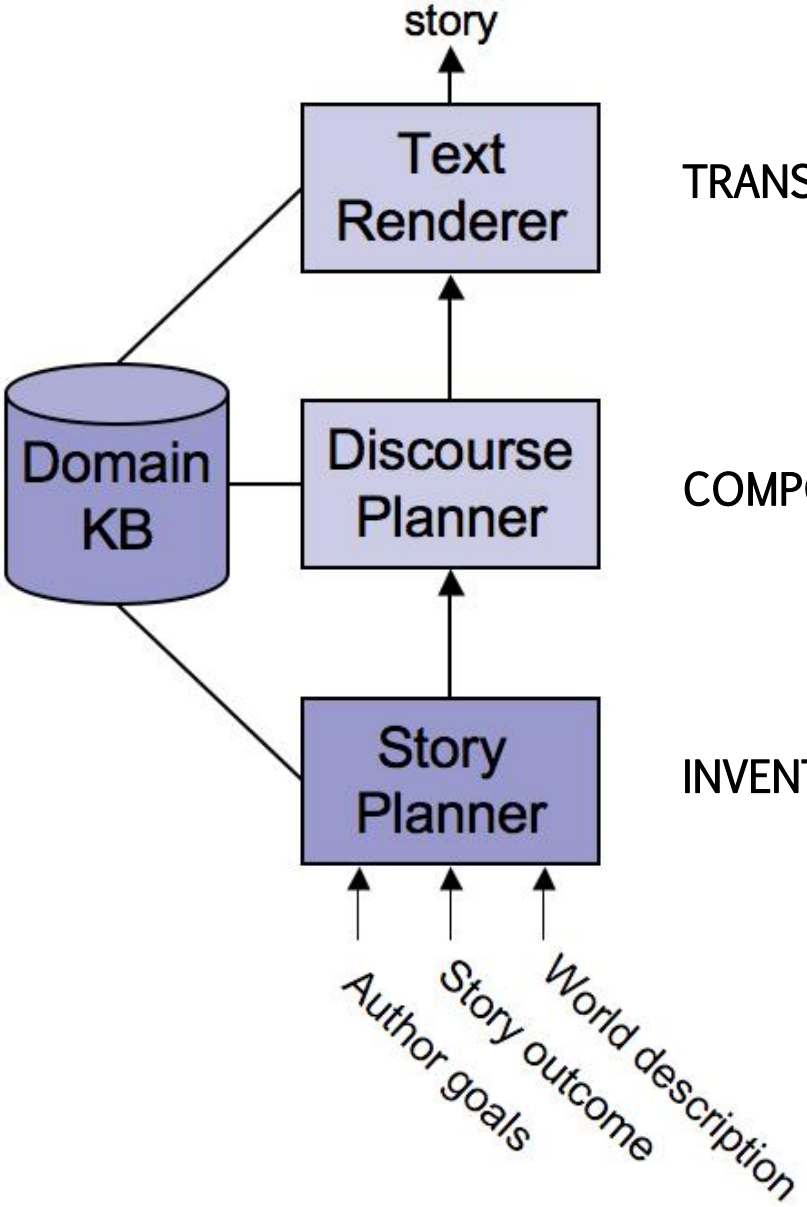

TRANSMISSION

COMPOSITION

INVENTION

Grounding ICTIVS

(Riedl, 2004)

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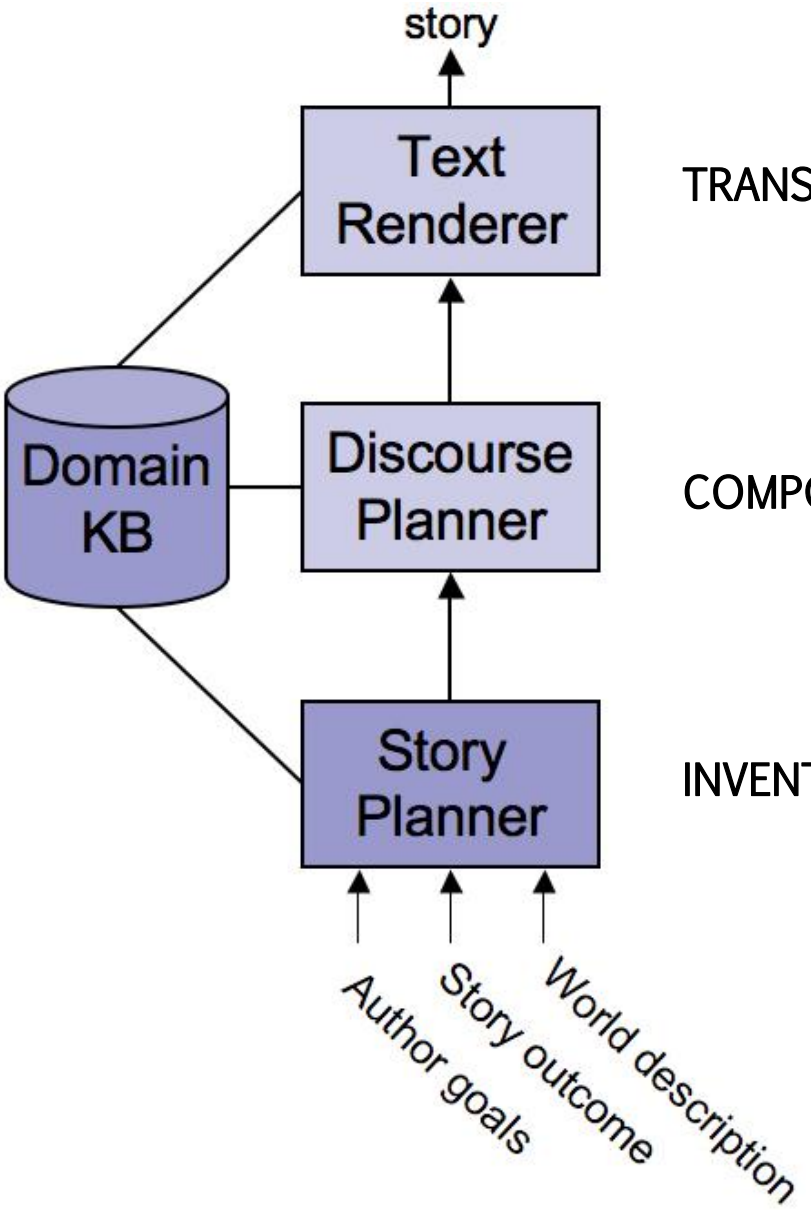

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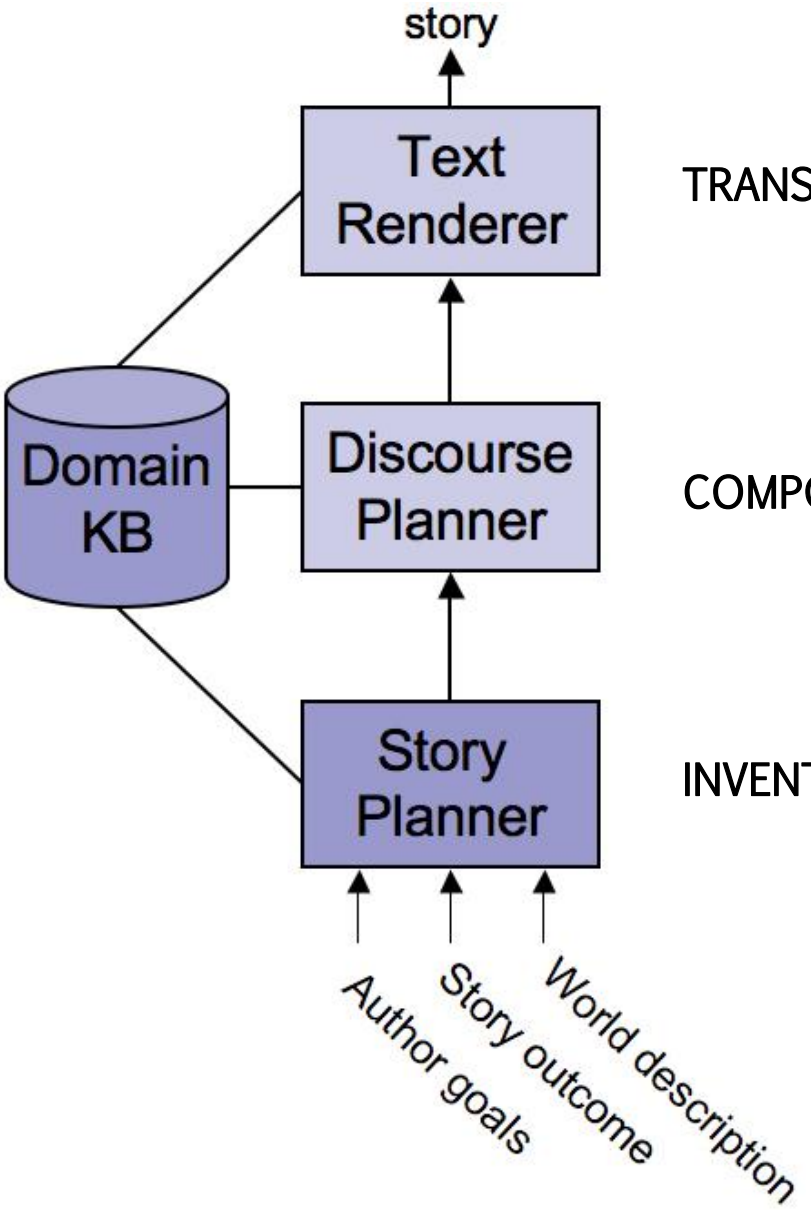


TRANSMISSION

COMPOSITION

INVENTION

Grounding ICTIVS

(Turner, 1992) MINSTREL

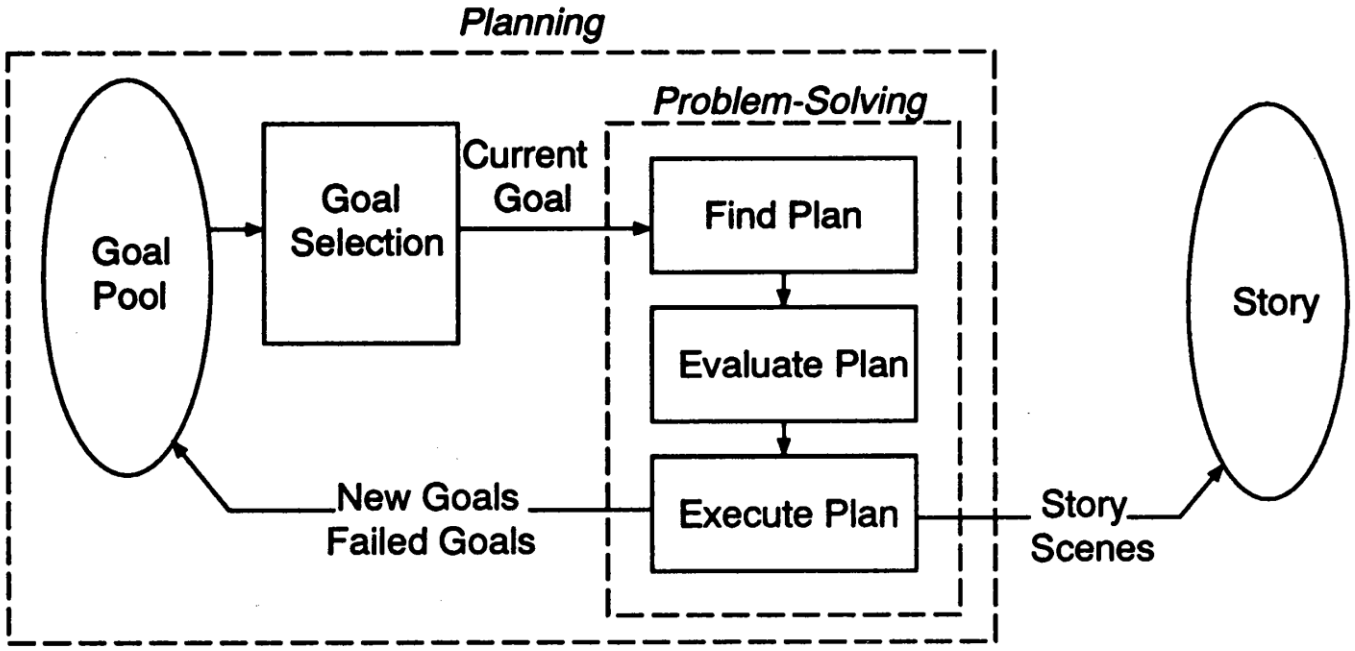
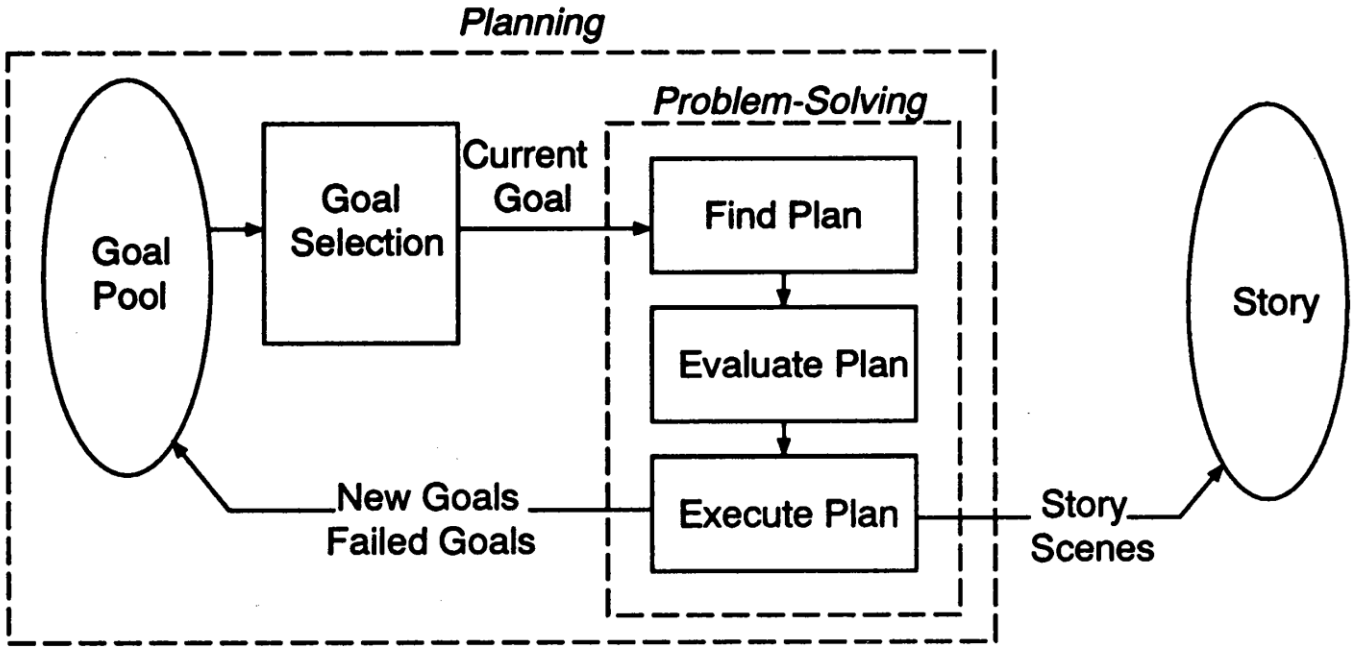


Figure 3.1 Author-Level Processes

(Turner, 1992)

MINSTREL

Thematic goals
Drama goals
Consistency goals
Presentation goals



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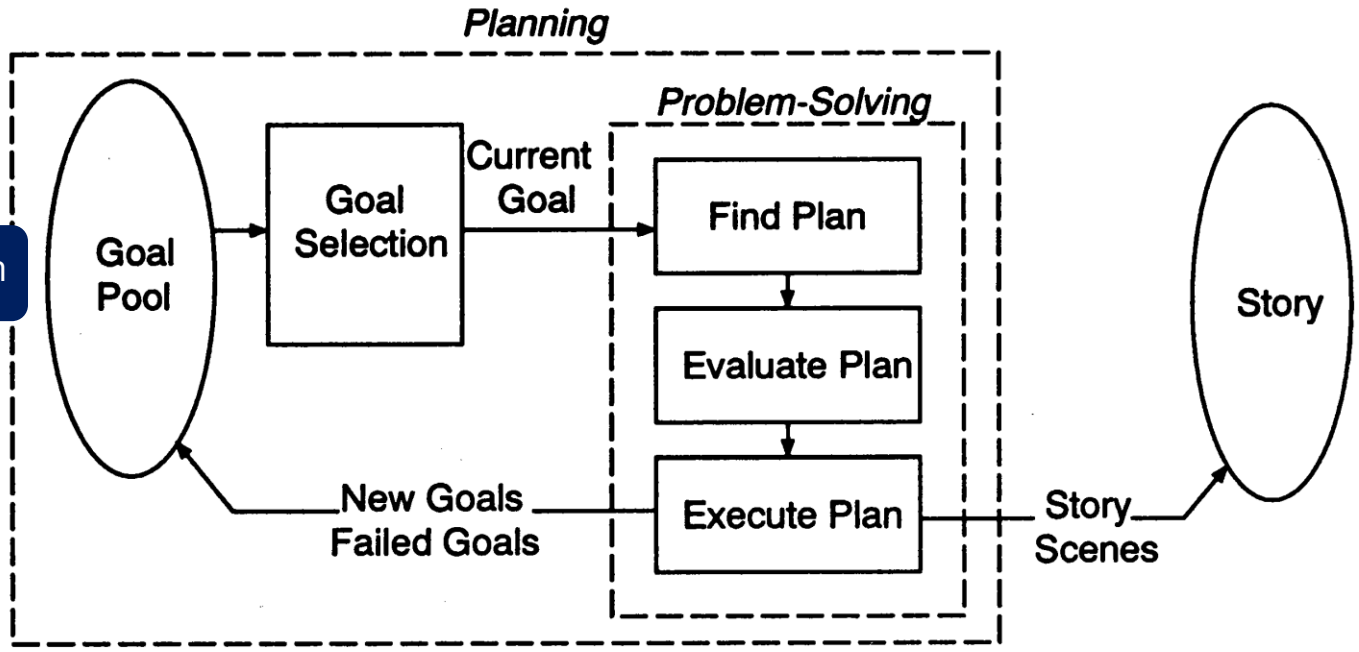

Figure 3.1 Author-Level Processes

intention

(Turner, 1992)

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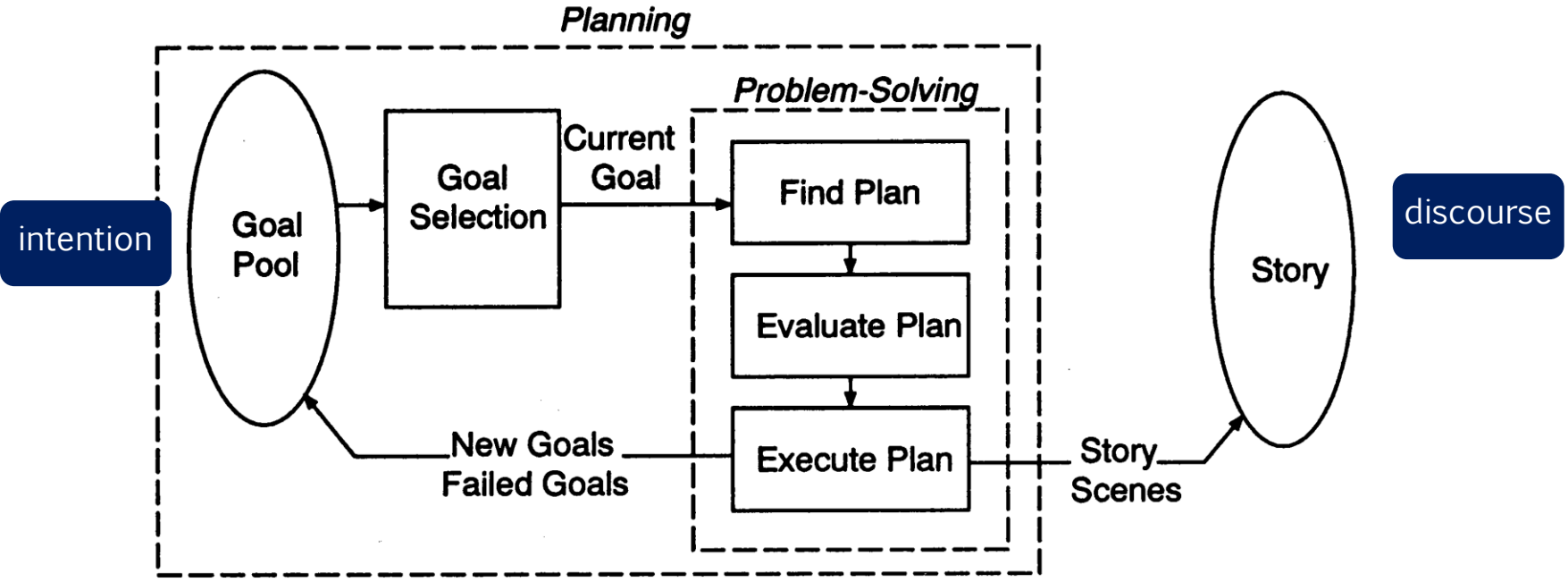
Drama goals
Consistency goals
Presentation goals



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Drama goals
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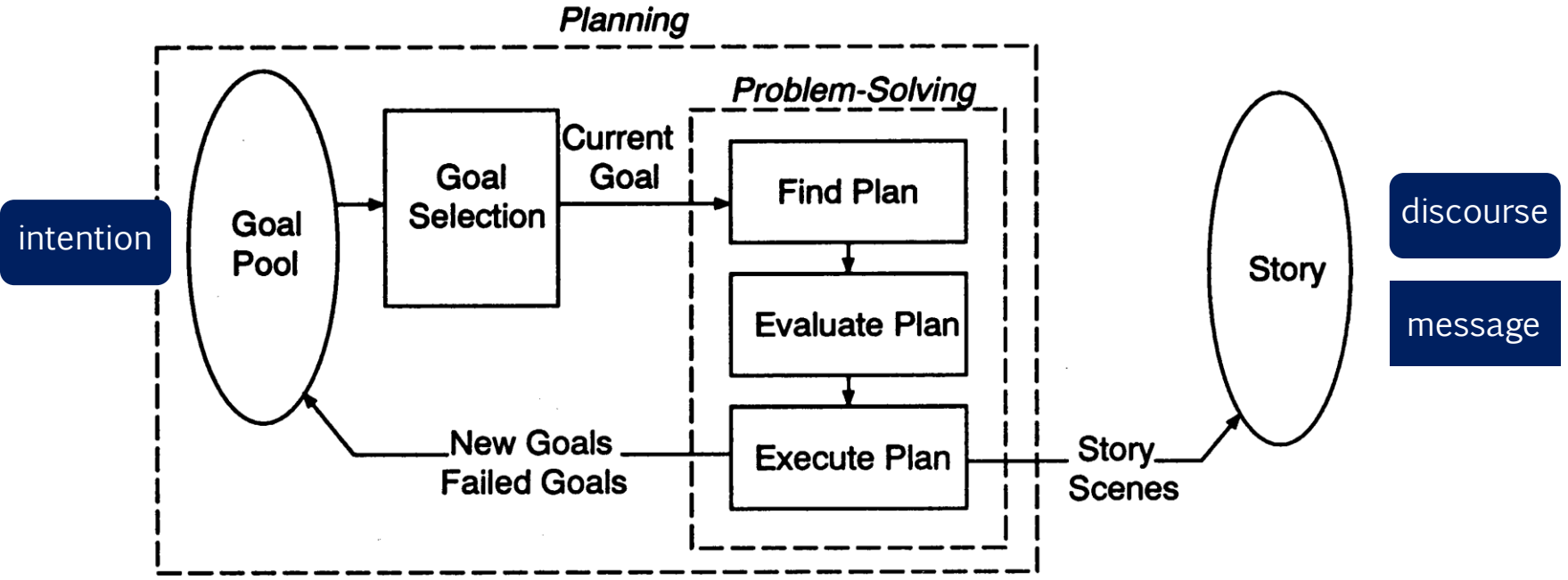

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Drama goals
Consistency goals
Presentation goals

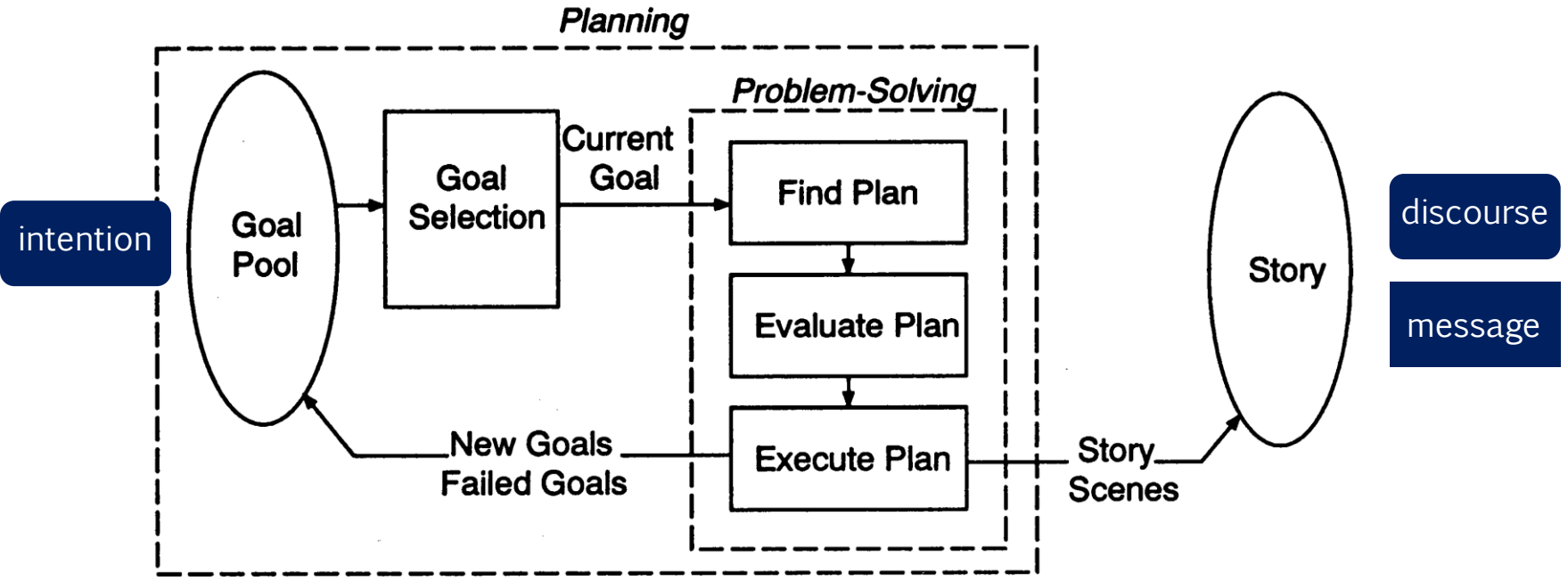

Figure 3.1 Author-Level Processes

INVENTION/COMPOSITION

(Turner, 1992)

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Drama goals
Consistency goals
Presentation goals

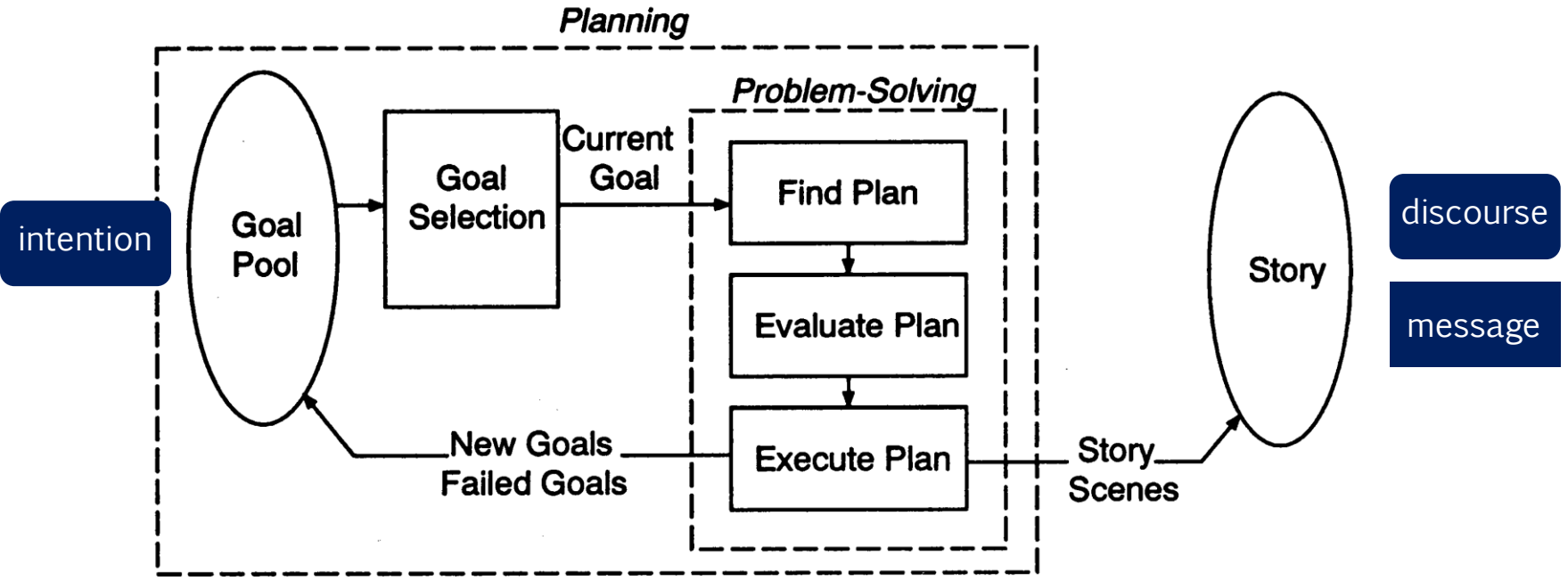

Figure 3.1 Author-Level Processes

INVENTION/COMPOSITION

VALIDATION

Grounding ICTIVS

(Turner, 1992)

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Drama goals
Consistency goals
Presentation goals

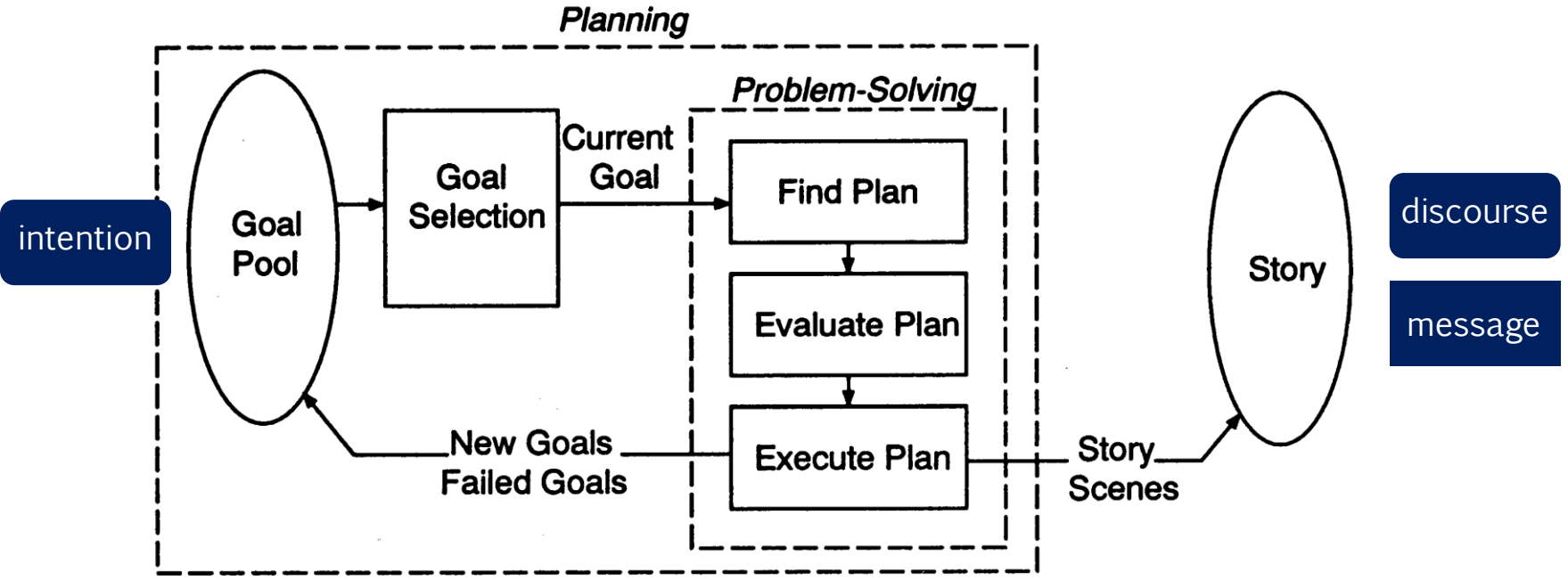


Figure 3.1 Author-Level Processes

INVENTION/COMPOSITION

VALIDATION

Grounding ICTIVS

(Niehaus, 2009)

INFER

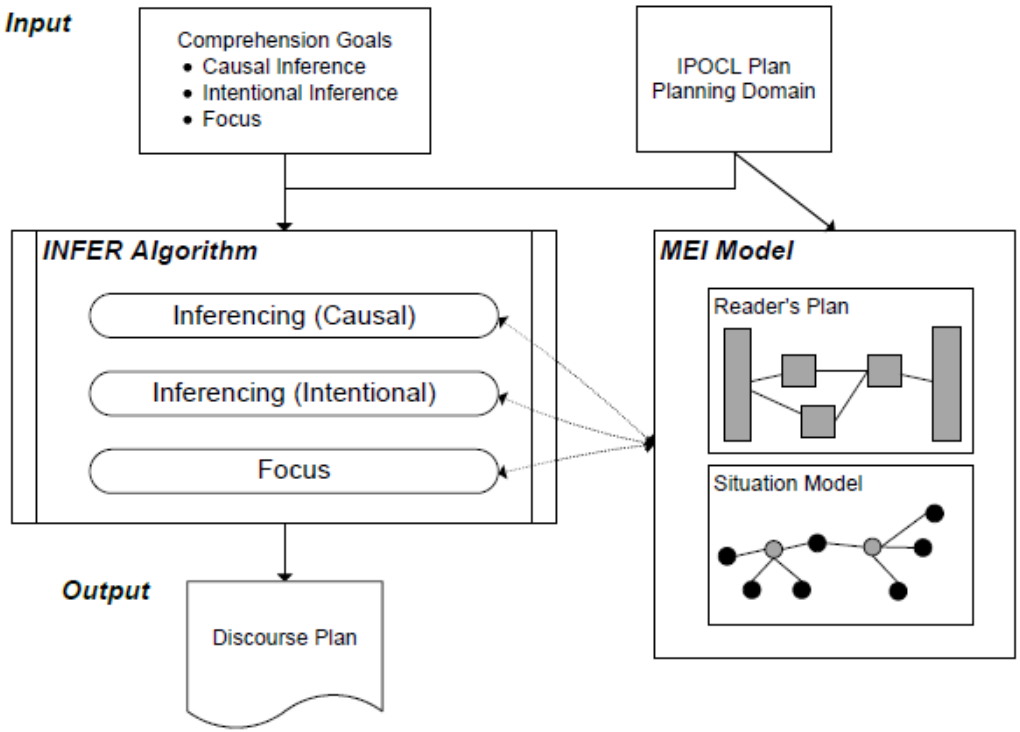
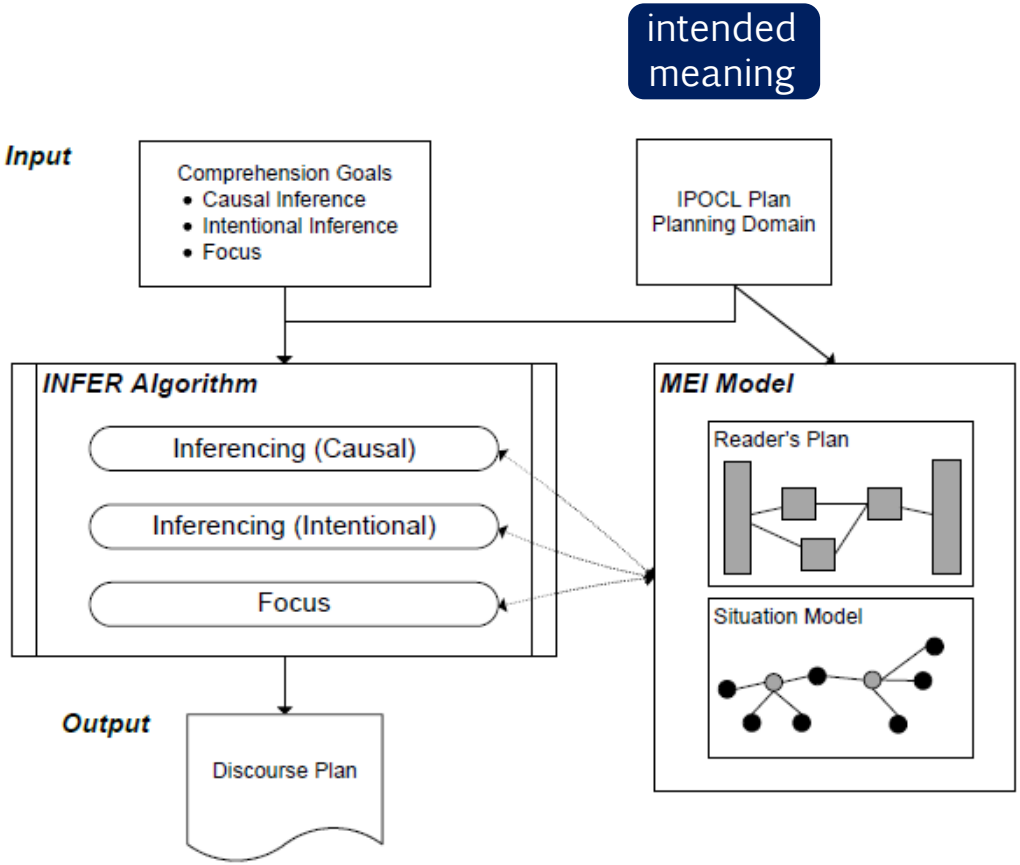


Figure 3.2: The INFER architecture.

(Niehaus, 2009)

INFER



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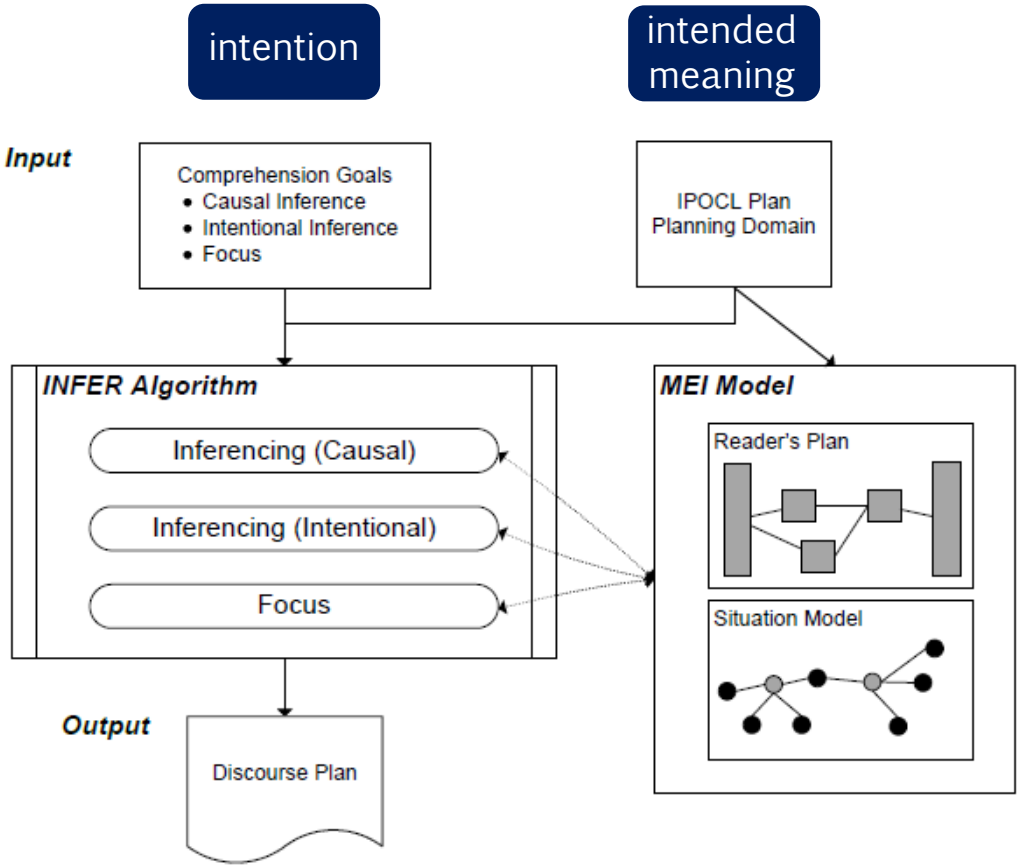

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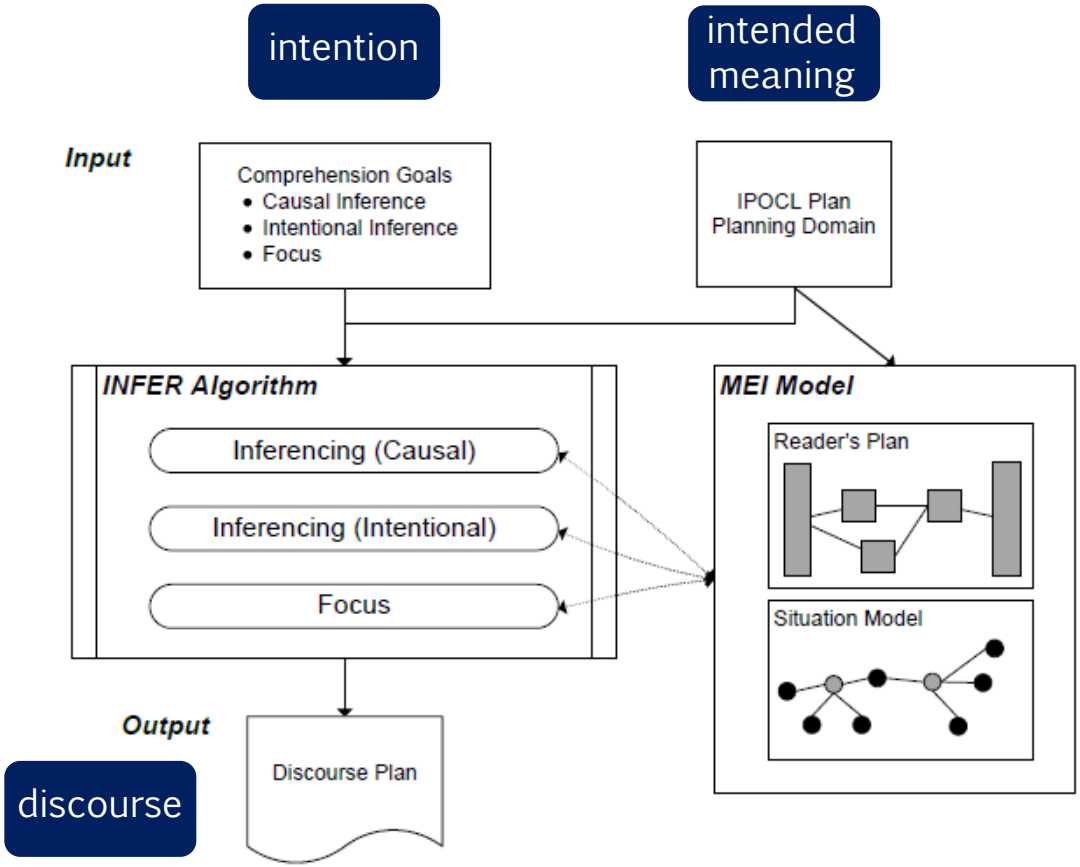

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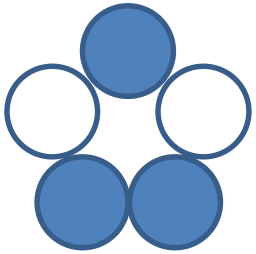
INFER



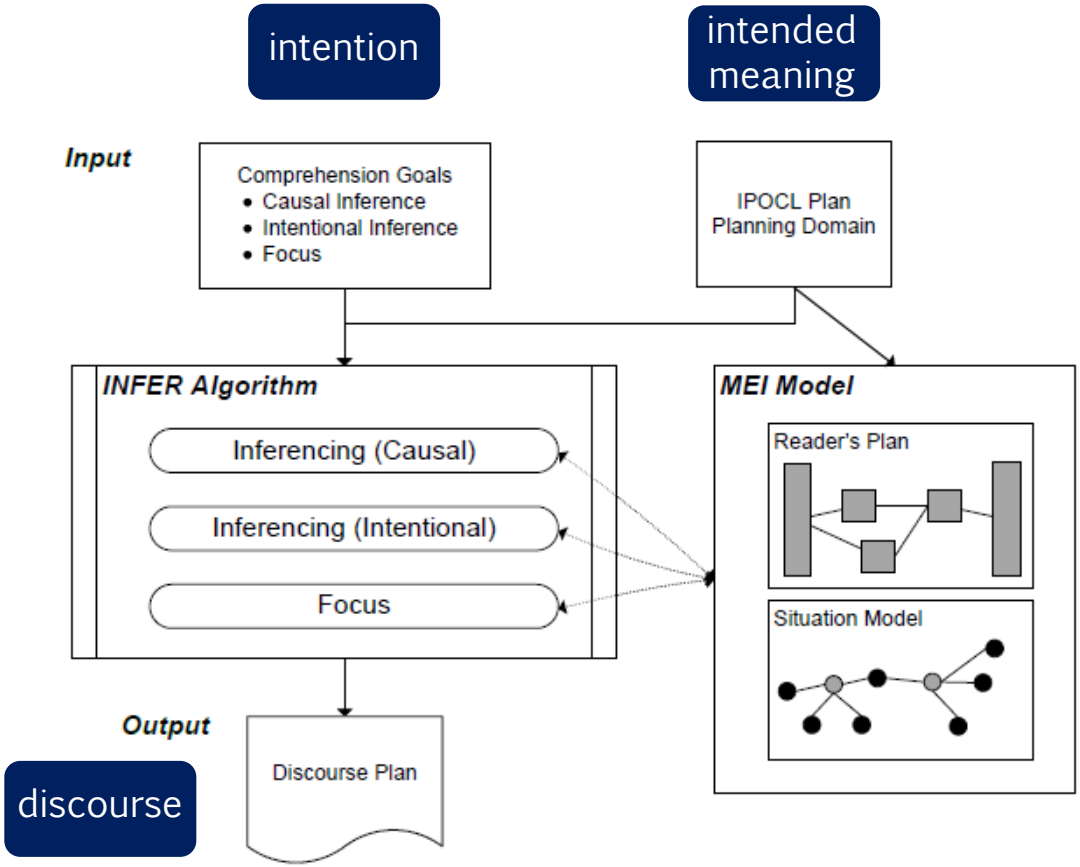


Figure 3.2: The INFER architecture.

(Gervás, 2012)

RACONTEUR

(Gervás, 2012)

RACONTEUR

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(Gervás, 2012)

RACONTEUR

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(Gervás, 2012)


RACONTEUR






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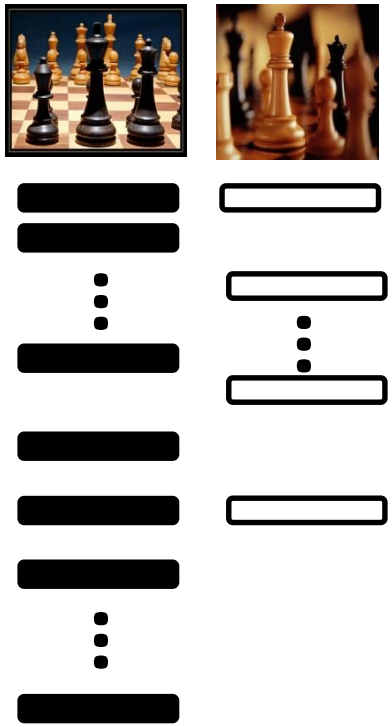
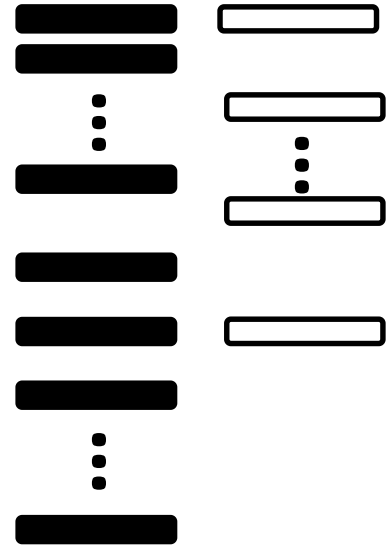
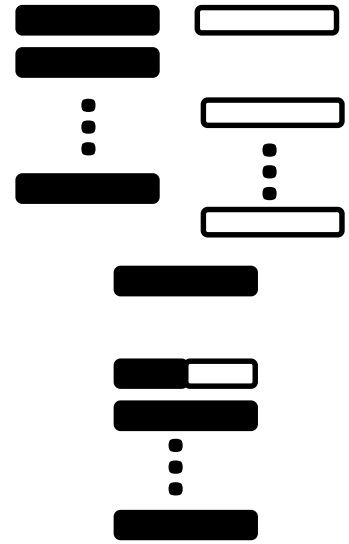
(Gervás, 2012)



RACONTEUR

(Gervás, 2012)

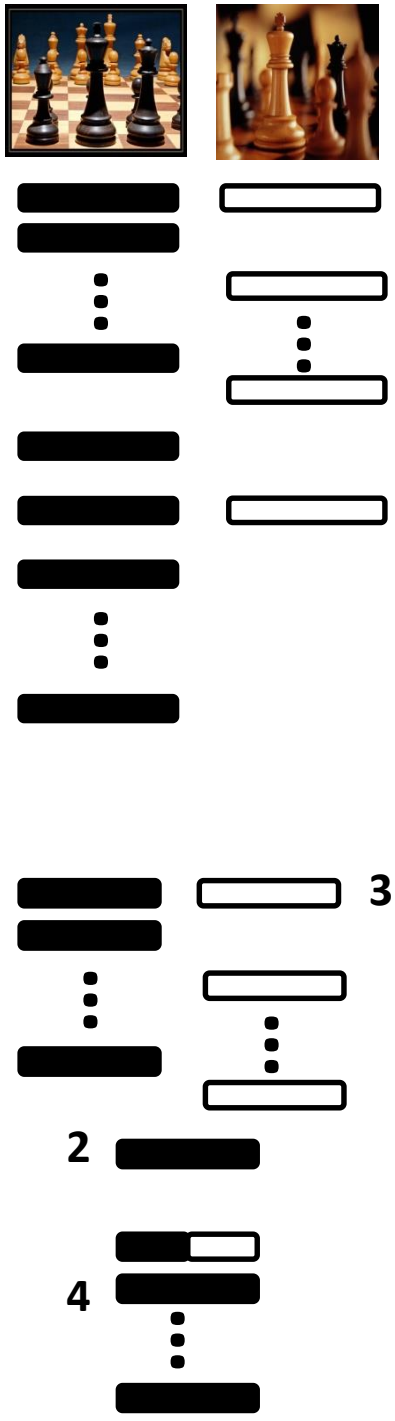




RACONTEUR

(Gervás, 2012)

RACONTEUR



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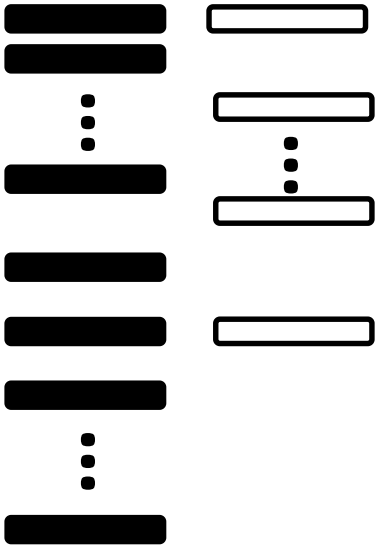

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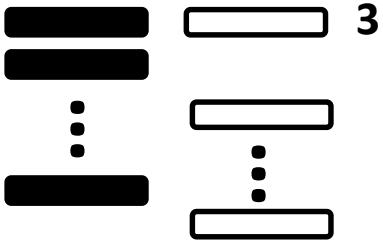

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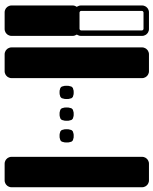

3

4

RACONTEUR

The black queen was four squares north of the centre of the board. The third black pawn was to the right.
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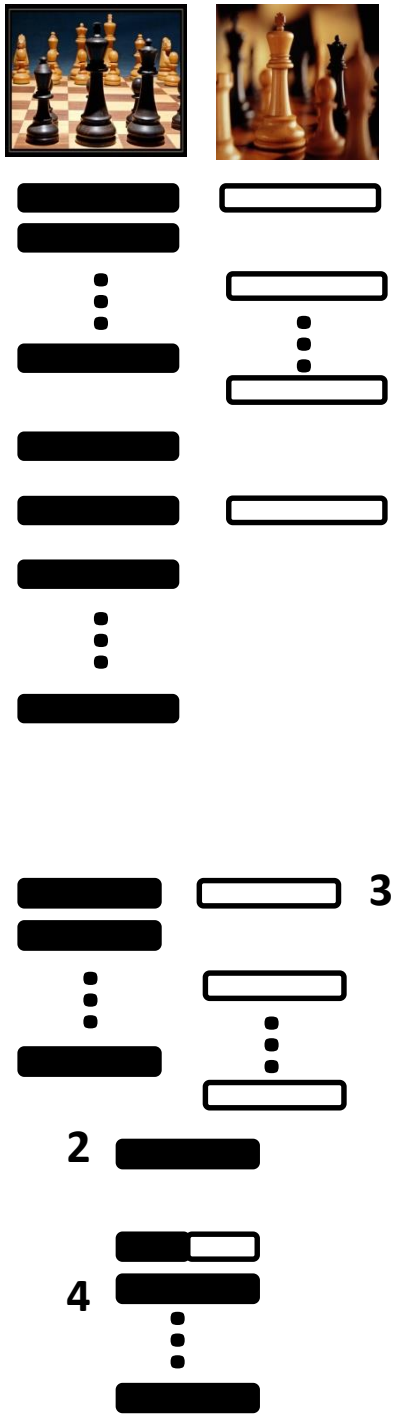
(Gervás, 2012)

RACONTEUR

intended meaning



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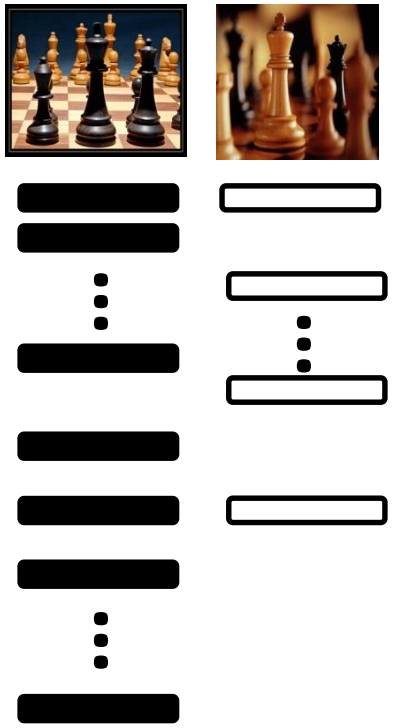

discourse

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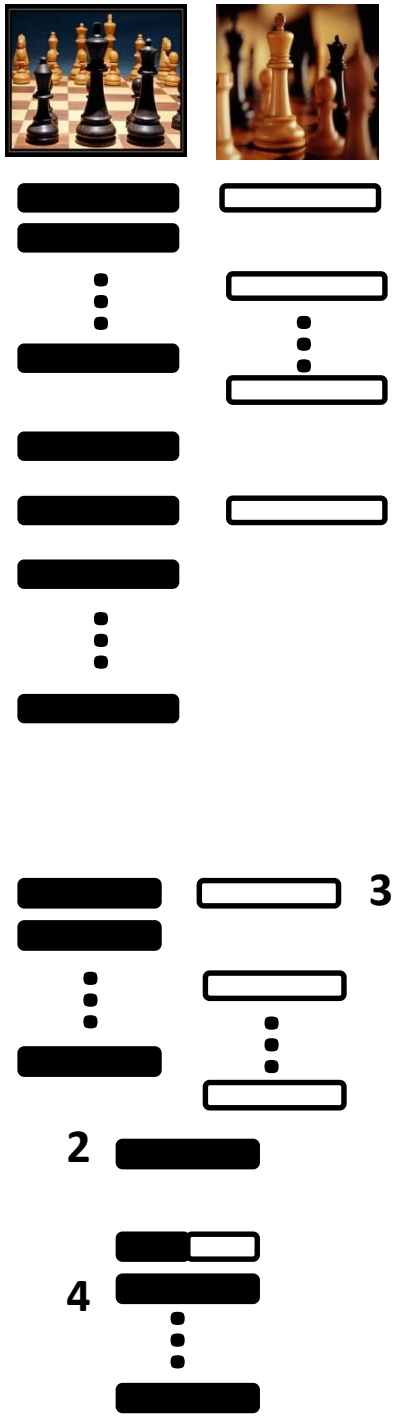

1 3 2 4

discourse

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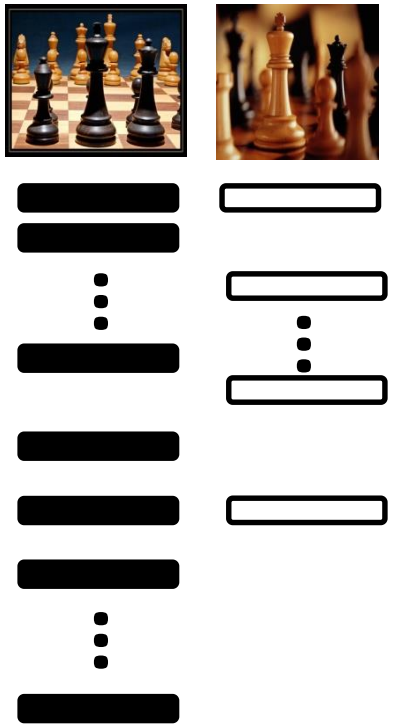

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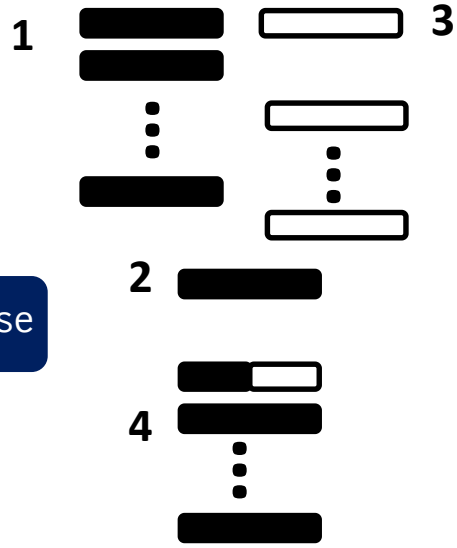

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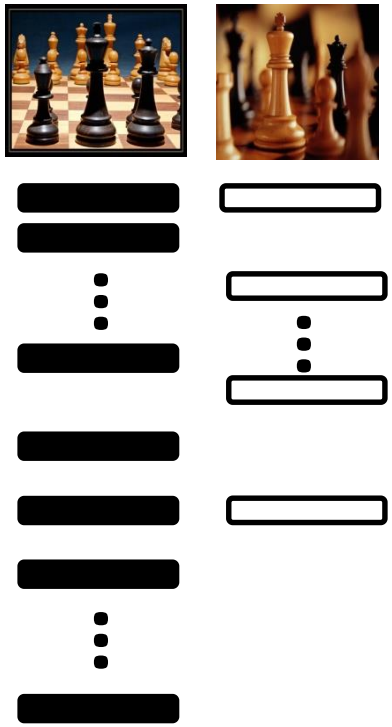

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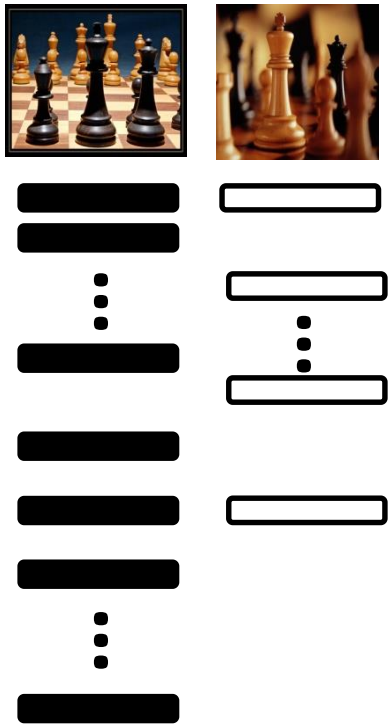

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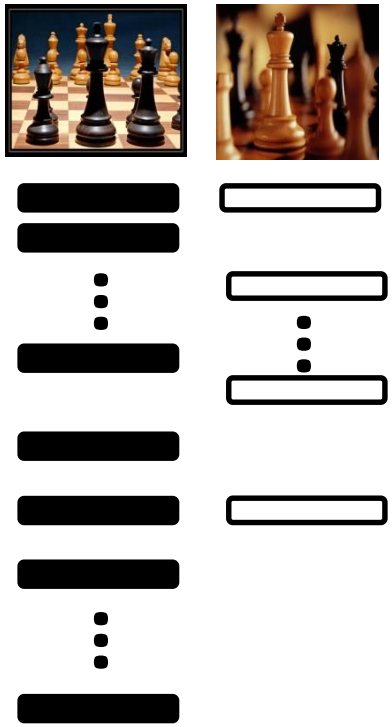

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RACONTEUR

intended meaning

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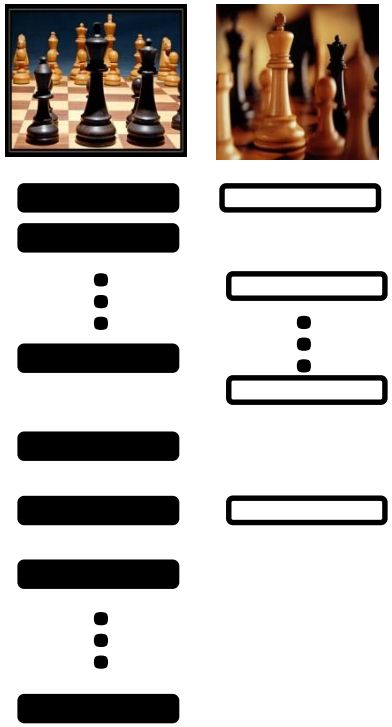

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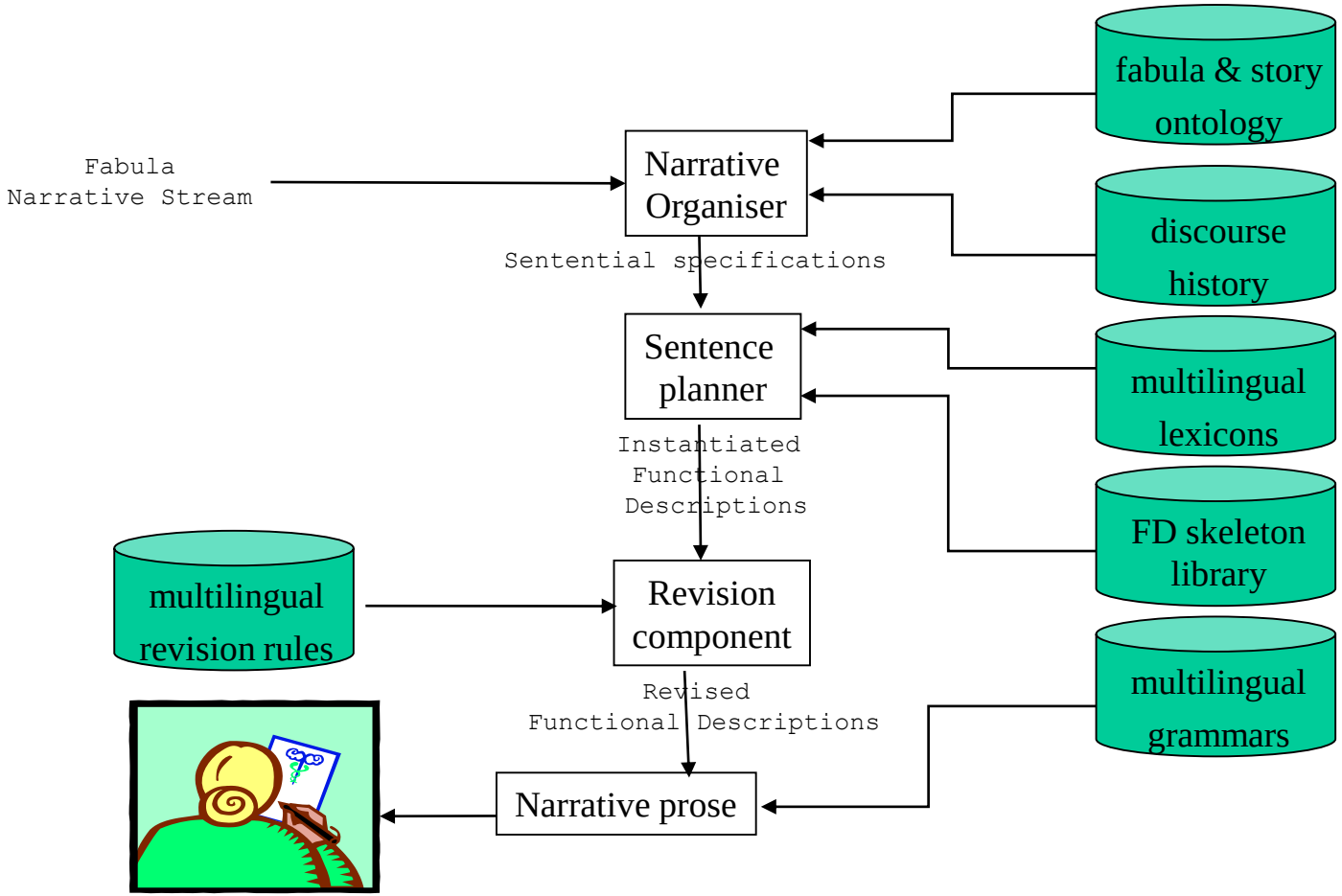
(Callaway, 2000)

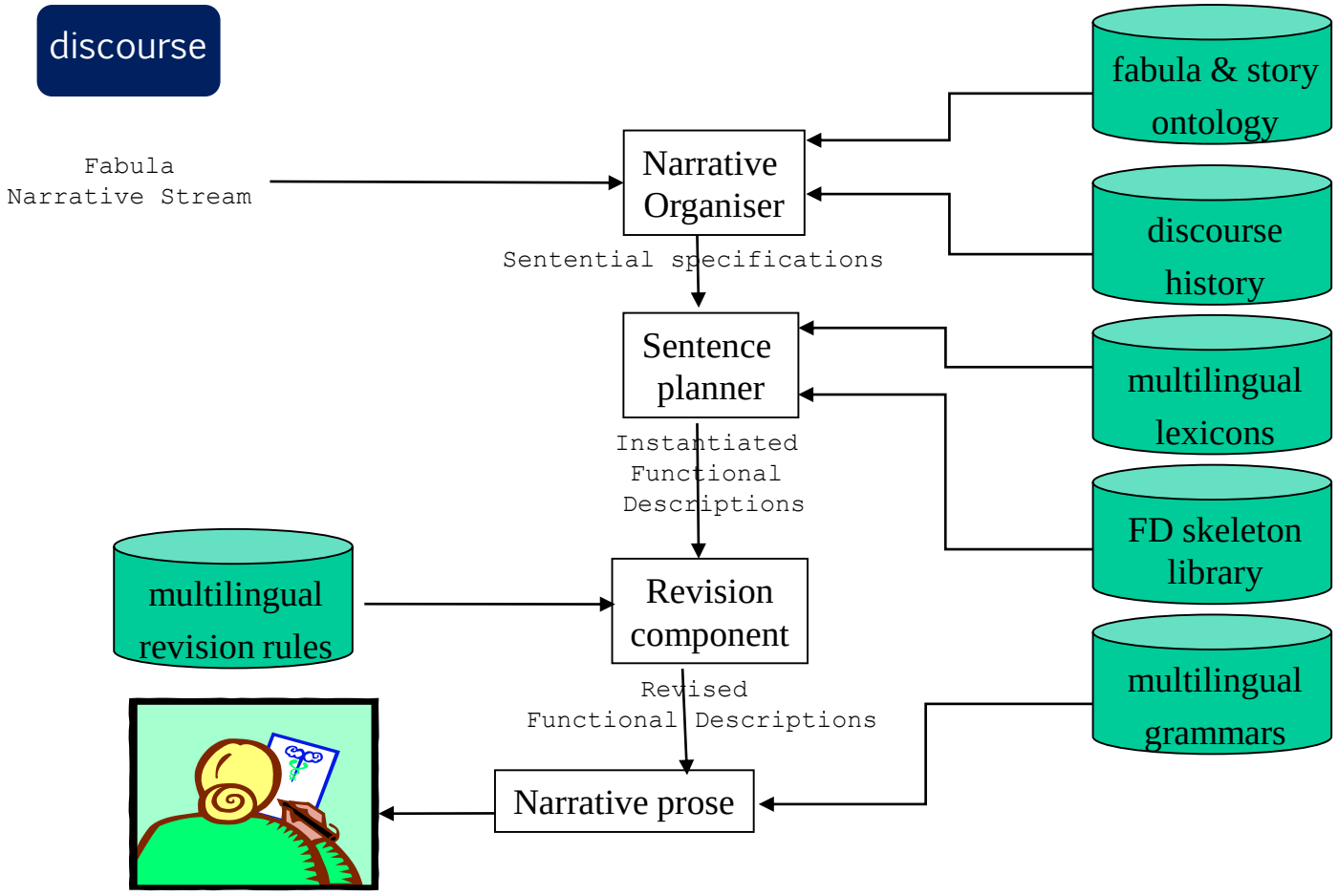
STORYBOOK



Grounding ICTIVS

(Callaway, 2000)

STORYBOOK



Grounding ICTIVS

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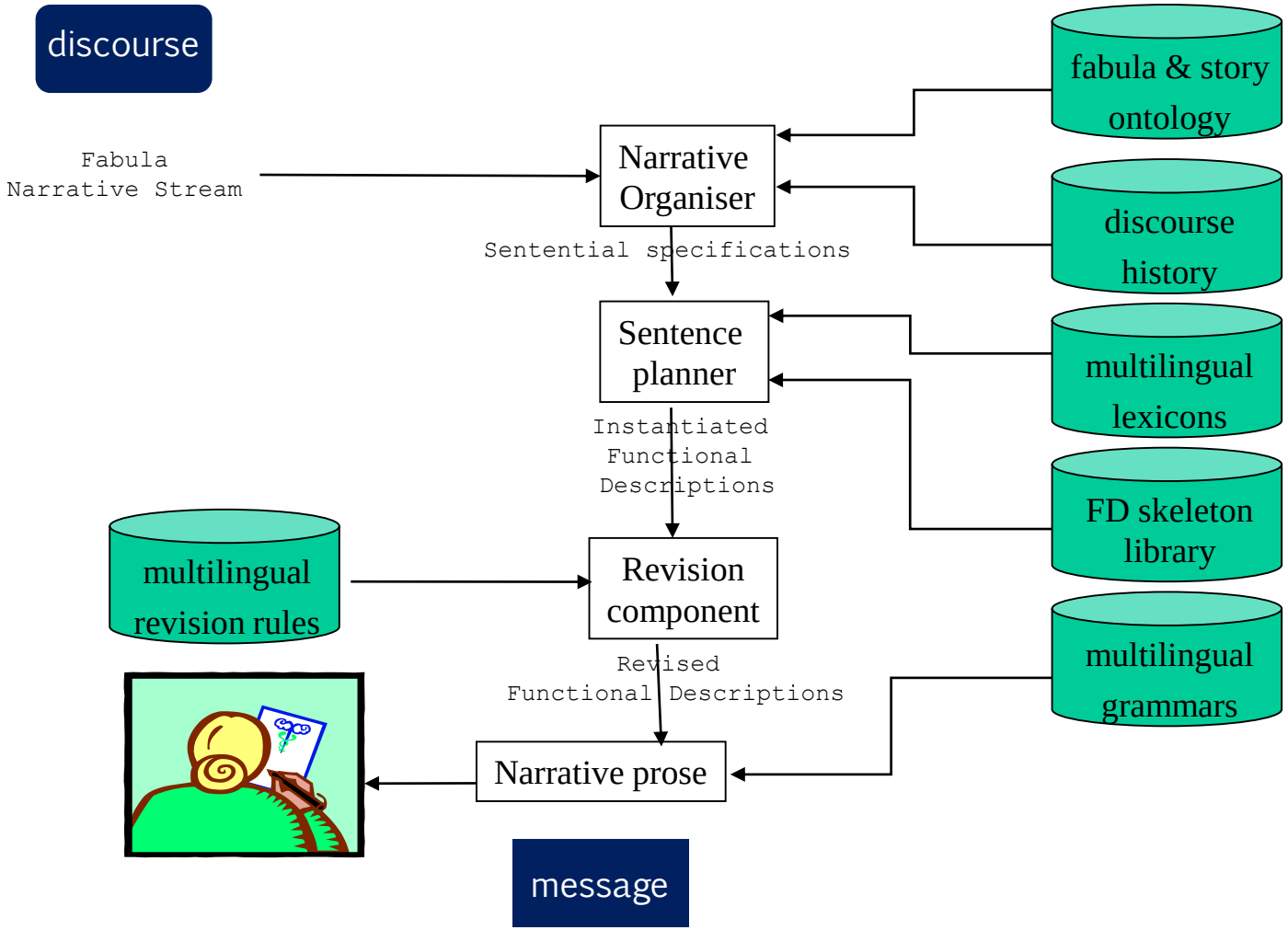

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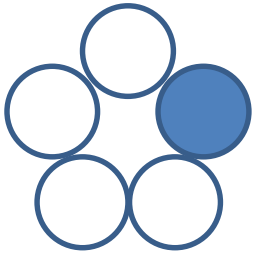
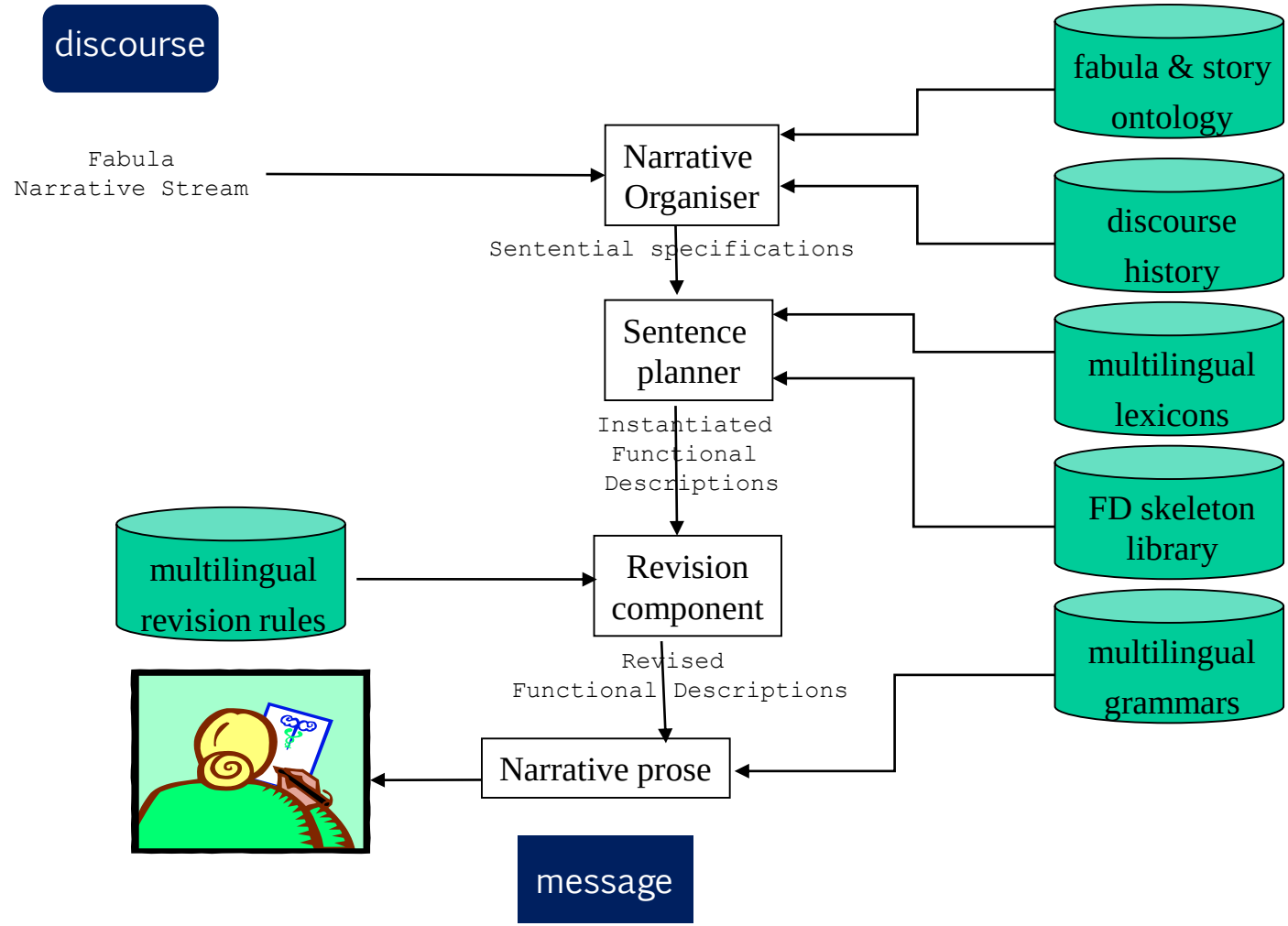
(Callaway, 2000)

STORYBOOK





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(O'Neill, 2013)

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discourse

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T — discourse

NM + MS + EP — interpreted meaning

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T — discourse

NM + MS + EP — interpreted meaning

Suspense — impression

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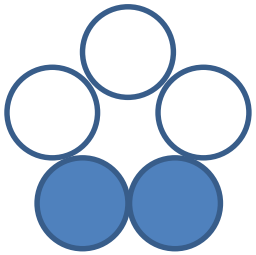


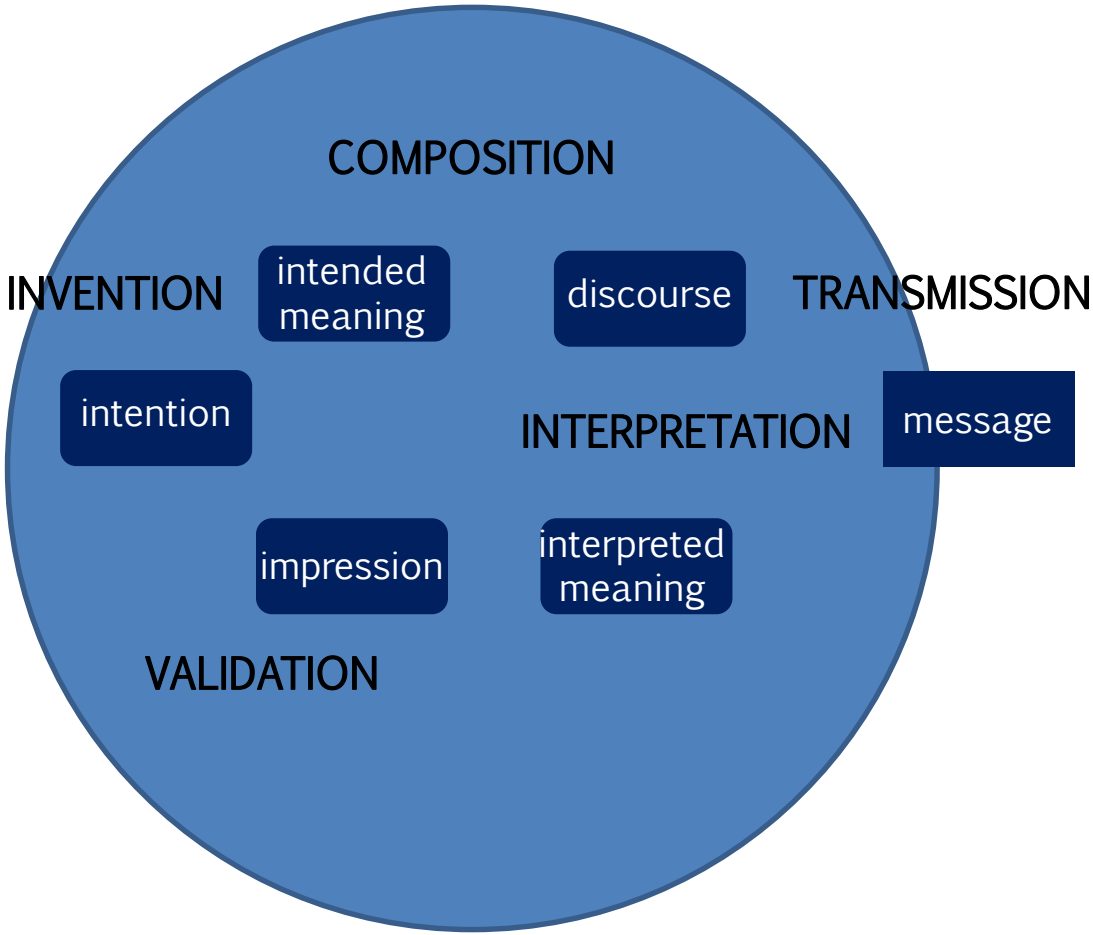
T — discourse

NM + MS + EP — interpreted meaning

Suspense — impression

Grounding ICTIVS

Creativity in the ICTIVS model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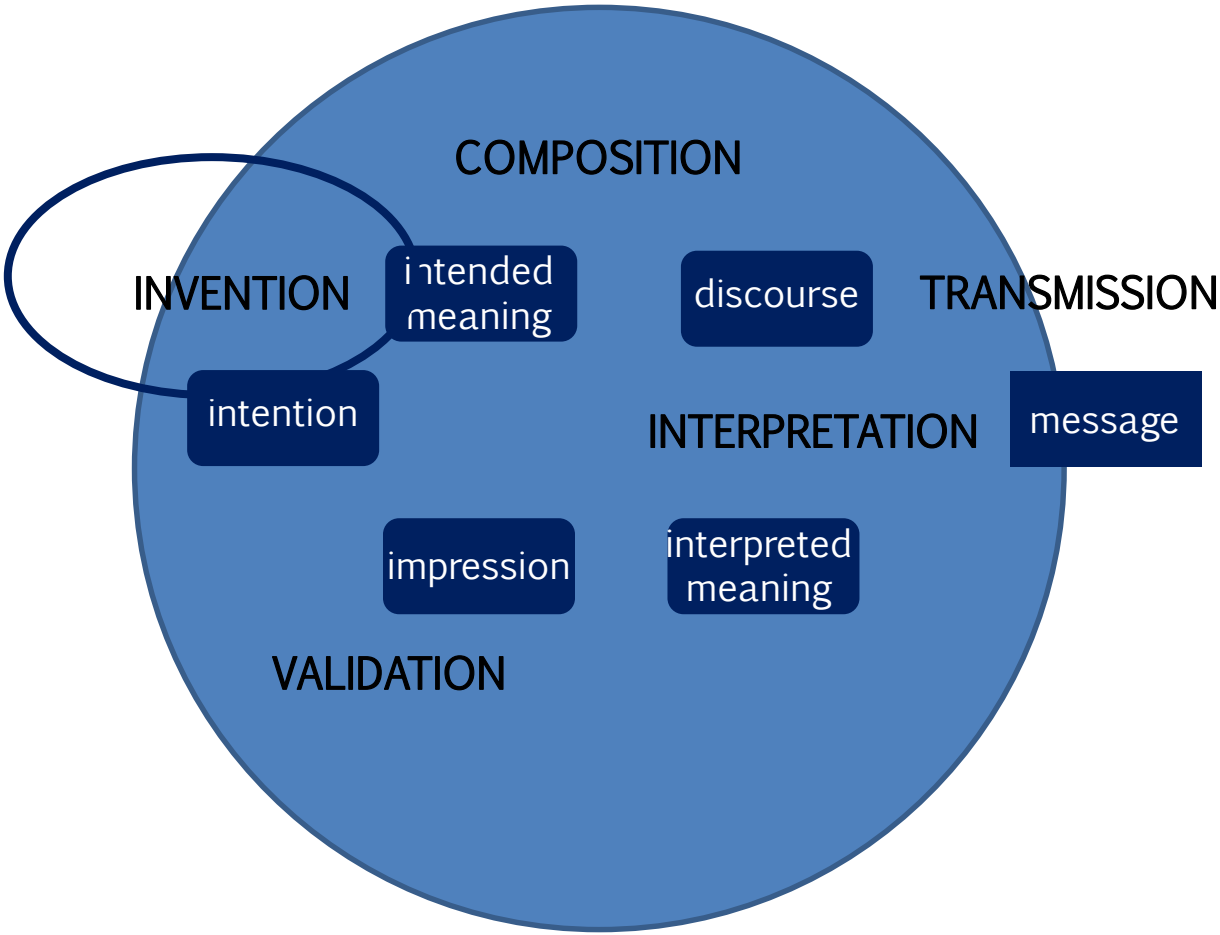
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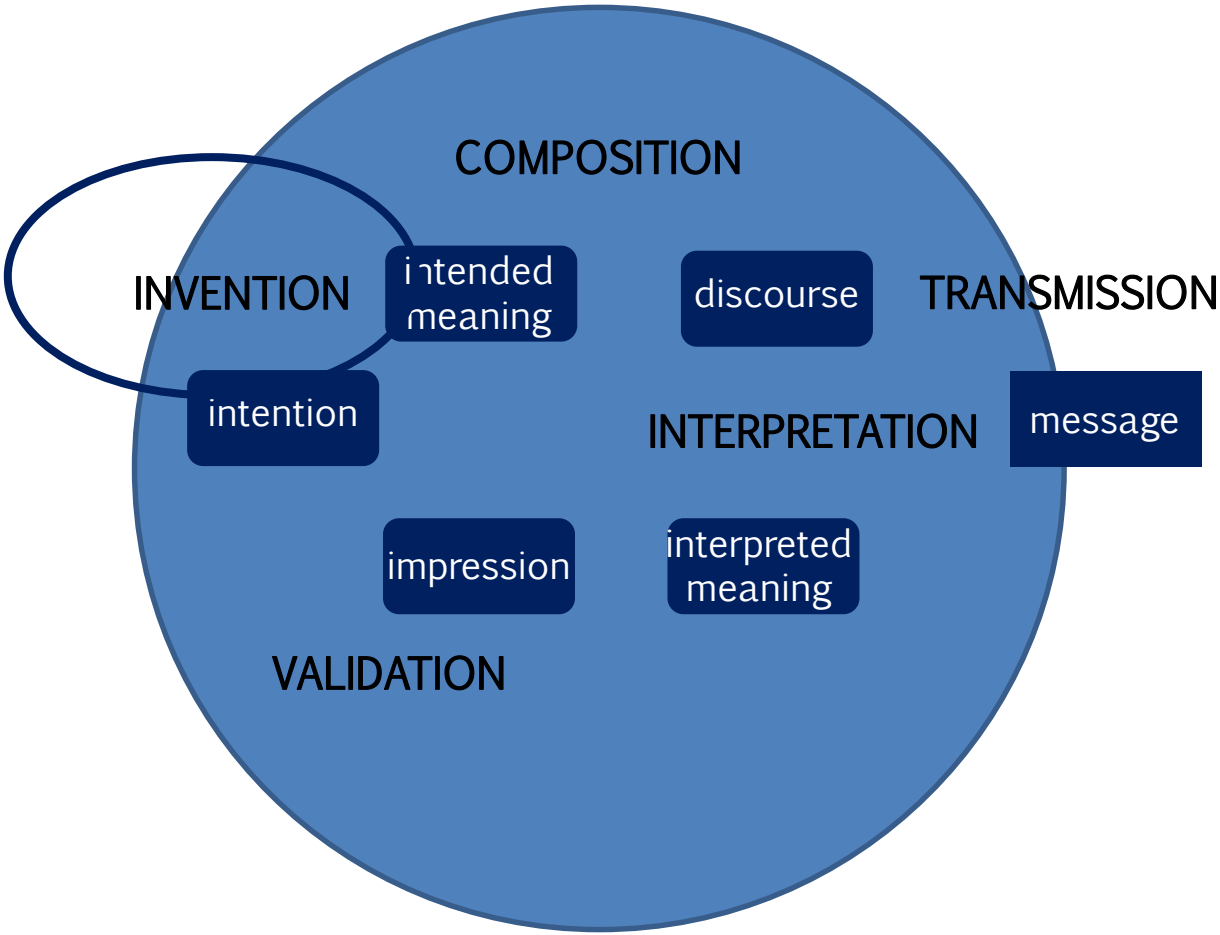
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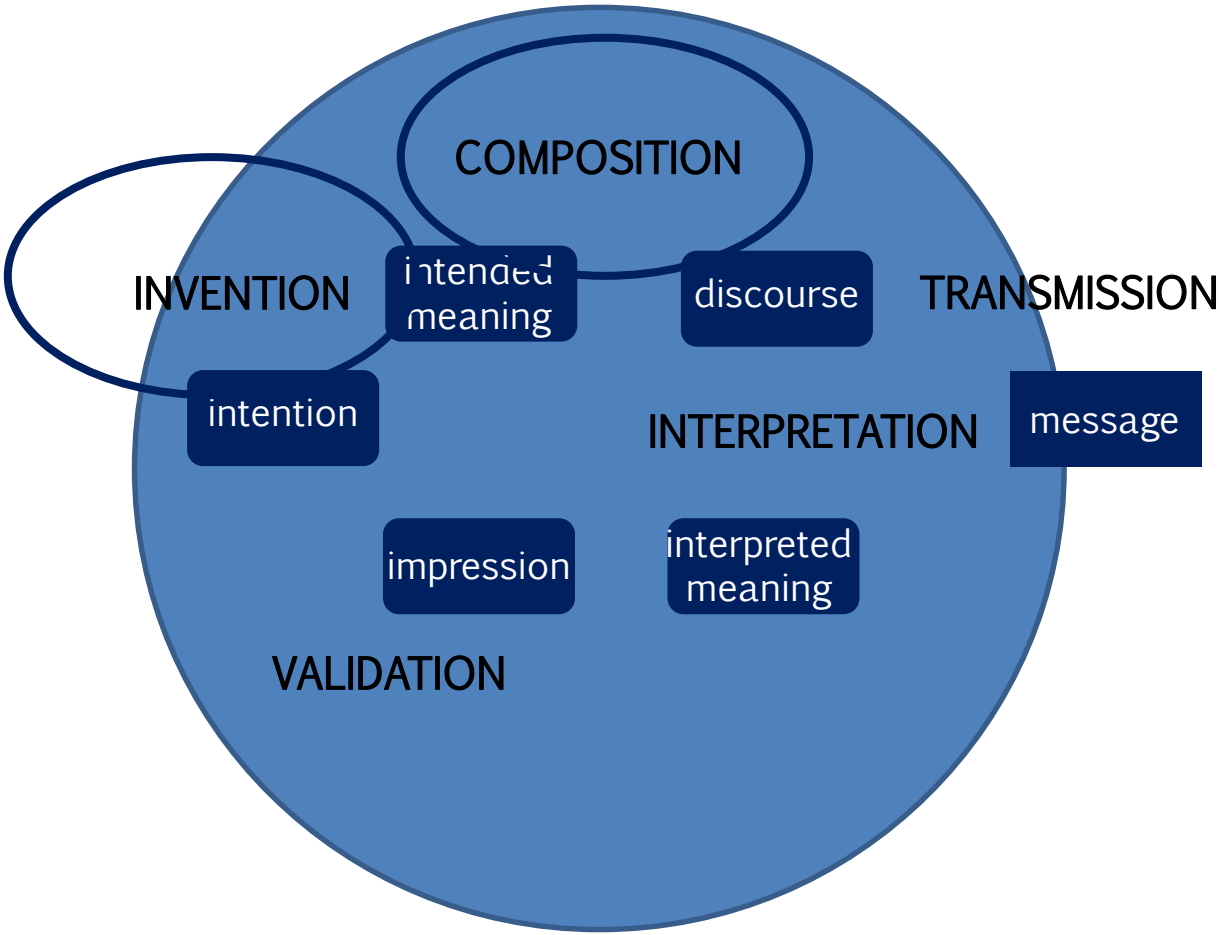
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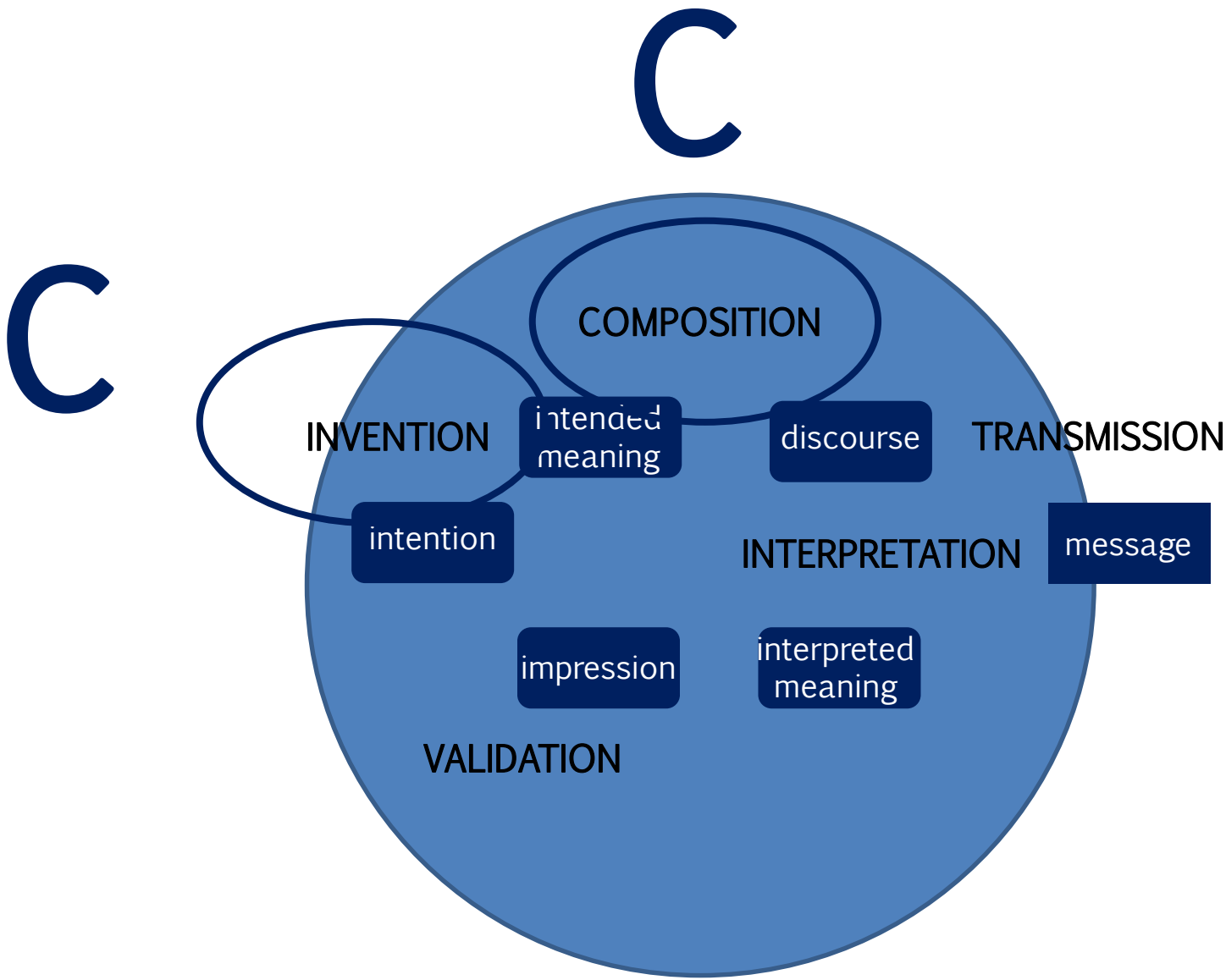
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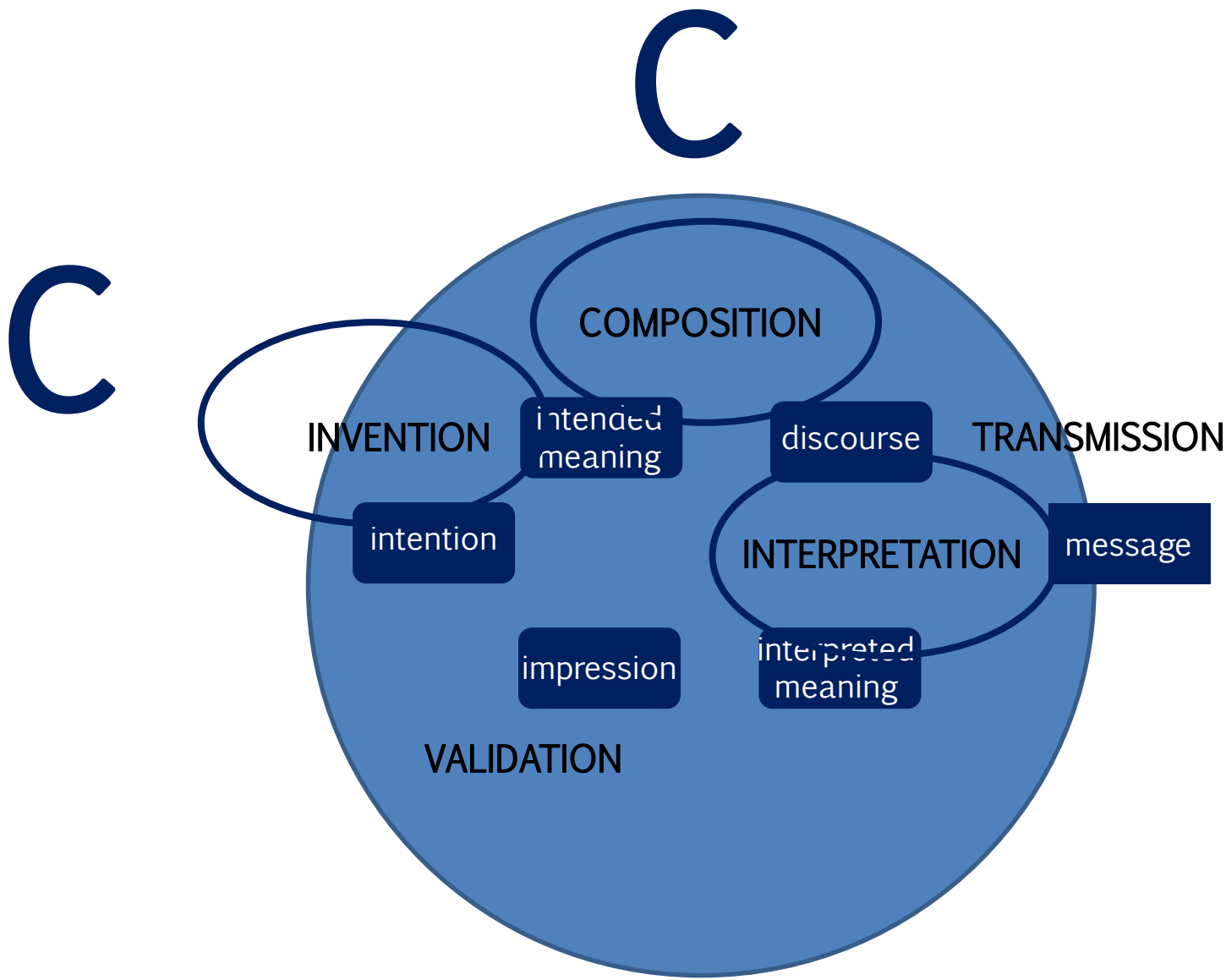
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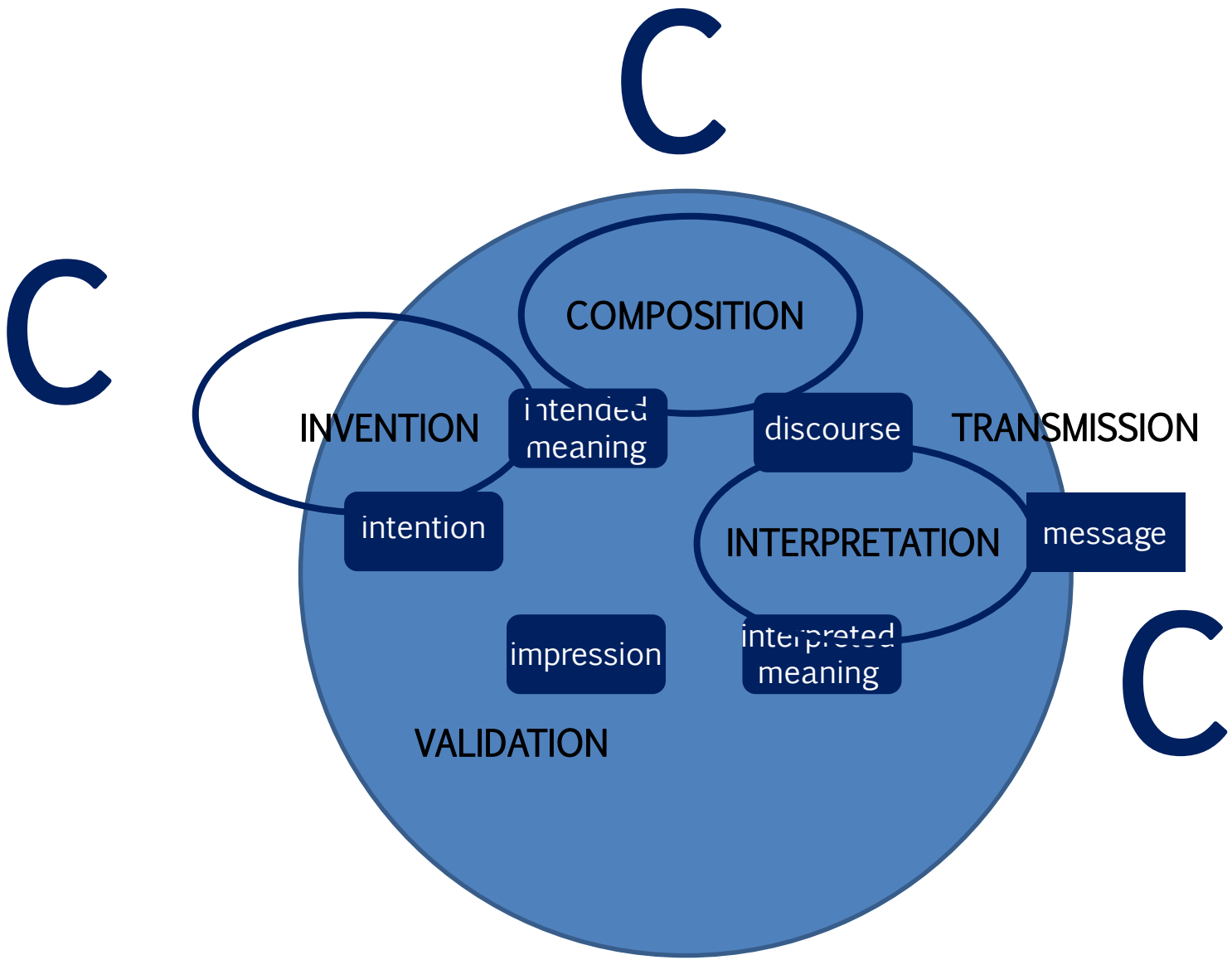
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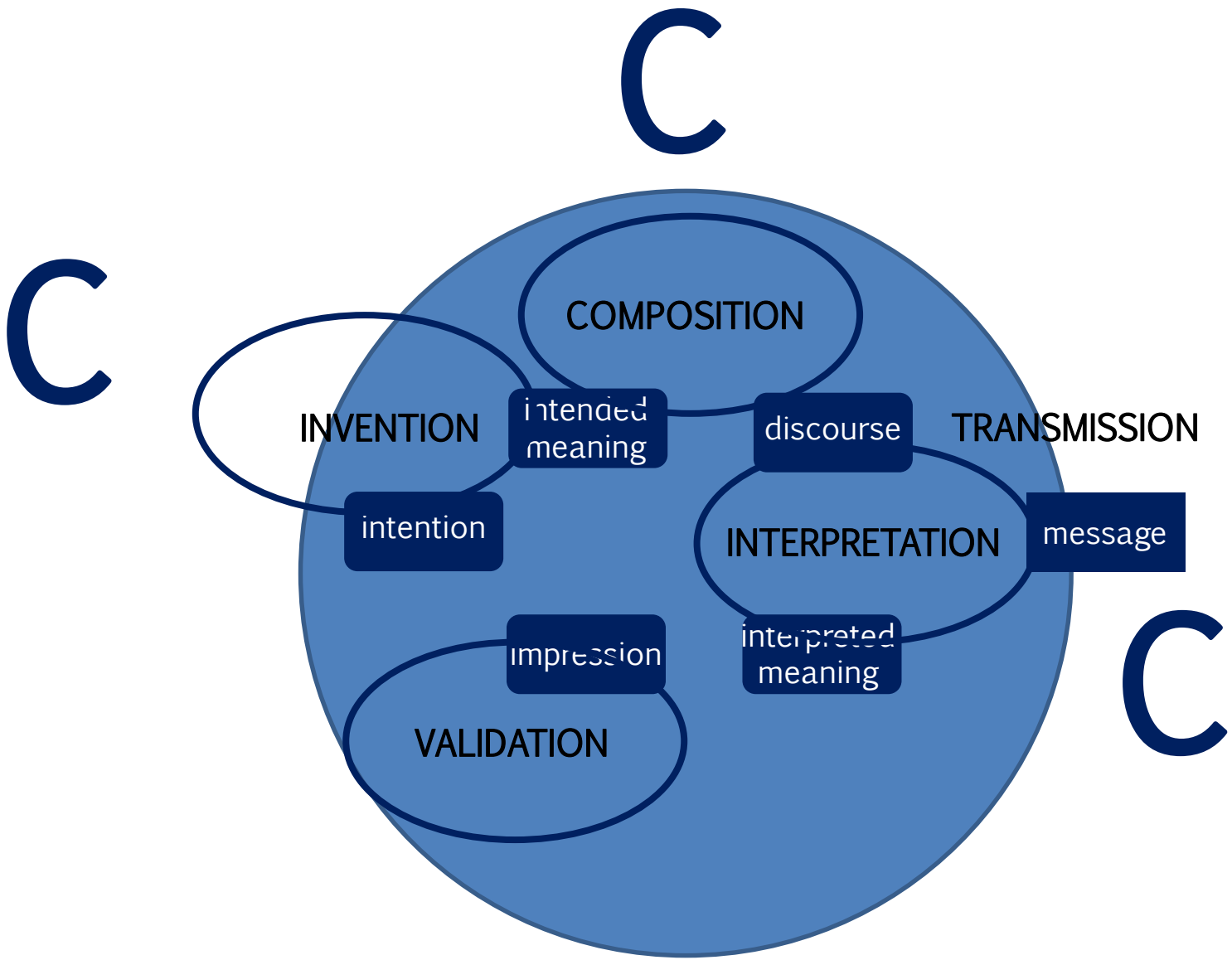
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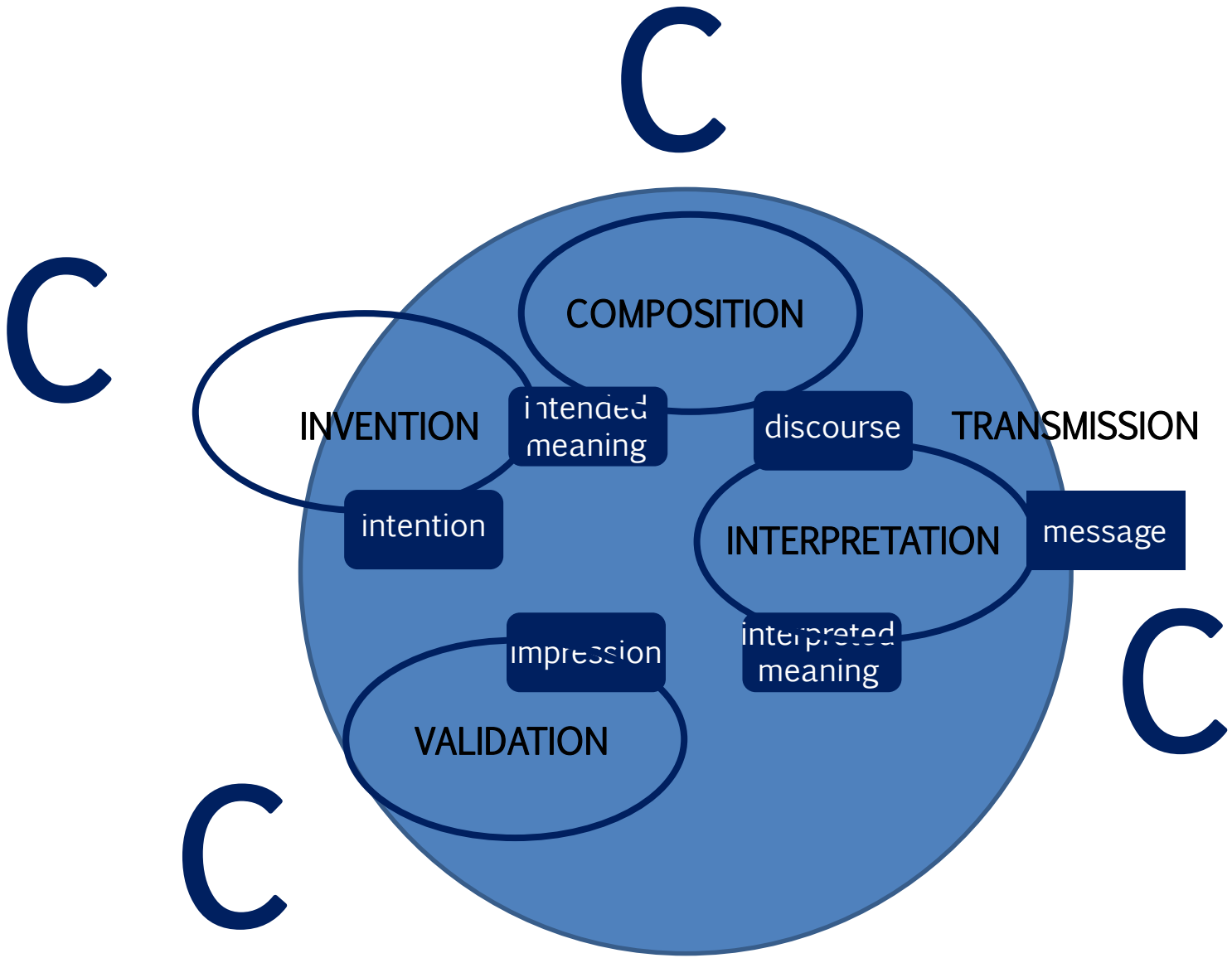
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ICTIVS

Conclusions

Storytelling is extremely complex

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Take it apart to put it together again

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Take it apart to put it together again

Creativity required at all levels

Storytelling is extremely complex

Take it apart to put it together again

Creativity required at all levels

Less often considered levels more relevant than popular ones!

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Take it apart to put it together again

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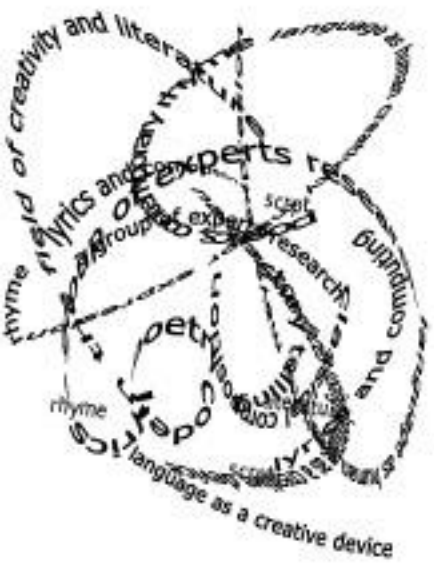
Feedback loop is fundamental to the process

Acknowledgements

This paper has been partially supported by the **projects WHIM 611560 and PROSECCO 600653** funded by the **European Commission**, Framework Program 7, the ICT theme, and the Future Emerging Technologies FET program.

Thank you!

http://nil.fdi.ucm.es



nIL

natural interaction based on language