

The Friendly Argument Notation



C. Michael Holloway

2020-05-30

Note:

1. These slides are not complete without accompanying oral commentary
2. The intended audience for these slides are individuals who are familiar with “a very brief informal but adequately comprehensive introduction to argument”

argument: your attempt to convince others to **believe** a **conclusion** through **reasoning** from one or more **premises**

conclusion: the statement you want your audience to **believe**

premise: a statement you think your audience **believes**

evidence: a name you may give to a **premise** you're certain your audience **believes**

assumption: a **premise** you are not prepared to justify if your audience does not **believe** it

reasoning : why you think the **premises** should cause your audience to **believe** your **conclusion**

binding: an association between a term used in an **argument** and the real-world information to which that term refers.

defeater: a statement that may cause your audience to not **believe** your **conclusion**

believe: accept as true

Believing

Sam is eligible to run for President of the USA

is justified by applying

The eligibility requirements in Article II of the Constitution

to these premises

Sam was born in the Commonwealth of Virginia

Sam is 57 years old

Sam has never lived outside of the United States

Believing

Sam is eligible to run for President of the USA

is justified by applying

The eligibility requirements in Article II of the Constitution

to these premises

Sam was born in the Commonwealth of Virginia

Sam is 57 years old

Sam has never lived outside of the United States

with these bindings

eligible: regarded as fulfilling the necessary criteria or qualifications

constitution: see <https://constitutioncenter.org/interactive-constitution/>

FAN: introduction - identifying the bindings

Believing

Sam is eligible to run for President of the USA

is justified by applying

The eligibility requirements in Article II of the Constitution

to these premises

Sam was born in the Commonwealth of Virginia

Sam is 57 years old

Sam has never lived outside of the United States

with these bindings

eligible: regarded as fulfilling the necessary criteria or qualifications

constitution: see <https://constitutioncenter.org/interactive-constitution/>

FAN: introduction - adding a defeater

Believing

Sam is eligible to run for President of the USA

is justified by applying

The eligibility requirements in Article II of the Constitution

to these premises

Sam was born in the Commonwealth of Virginia

Sam is 57 years old

Sam has never lived outside of the United States

with these bindings

eligible: regarded as fulfilling the necessary criteria or qualifications

constitution: see <https://constitutioncenter.org/interactive-constitution/>

unless

Sam has been twice elected to the office of President of the USA

Believing

Sam is eligible to run for President of the USA {1}

is justified by applying

The eligibility requirements in Article II of the Constitution {2}

to these premises

Sam was born in the Commonwealth of Virginia {3}

Sam is 57 years old {4}

Sam has never lived outside of the United States {5}

with these bindings

eligible: regarded as fulfilling the necessary criteria or qualifications {6}

constitution: see <https://constitutioncenter.org/interactive-constitution/> {7}

unless

Sam has been twice elected to the office of President of the USA {8}

FAN: diving further - case does not matter

believinG

Sam is eligible to run for President of the USA {1}

IS justified by applying

the eligibility requirements in article II of the Constitution {2}

to these PREMISES

sam was born in the commonwealth of virginia {3}

sam is 57 years old {4}

Sam has never lived outside of the United States {5}

with these bindings

eligible: regarded as fulfilling the necessary criteria or qualifications {6}

Constitution: see <https://constitutioncenter.org/interactive-constitution/> {7}

unless

sam has been twice elected to the office of President of the USA {8}

FAN: diving further - white space (including blank lines) does not matter

Believing

Sam is eligible to run for President of the USA {1}

is justified by applying

The eligibility requirements in Article II of the Constitution {2}

to these premises

Sam was born in the Commonwealth of Virginia {3}

Sam is 57 years old {4}

Sam has never lived outside of the United States {5}

with these bindings

eligible: regarded as fulfilling the necessary criteria or qualifications {6}

constitution: see <https://constitutioncenter.org/interactive-constitution/> {7}

unless

Sam has been twice elected to the office of President of the USA {8}

FAN: diving further - text after a keyword does not matter

Believing

Sam is eligible to run for President of the USA {1}

is made possible by applying the following reasoning

The eligibility requirements in Article II of the Constitution {2}

to

Sam was born in the Commonwealth of Virginia {3}

Sam is 57 years old {4}

Sam has never lived outside of the United States {5}

with

eligible: regarded as fulfilling the necessary criteria or qualifications {6}

constitution: see <https://constitutioncenter.org/interactive-constitution/> {7}

unless the following defeater is true

Sam has been twice elected to the office of President of the USA {8}

FAN: diving further - color does not matter

Believing

Sam is eligible to run for President of the USA {1}

is justified by applying

The eligibility requirements in Article II of the Constitution {2}

to

Sam was born in the Commonwealth of Virginia {3}

Sam is 57 years old {4}

Sam has never lived outside of the United States {5}

with

eligible: regarded as fulfilling the necessary criteria or qualifications {6}

constitution: see <https://constitutioncenter.org/interactive-constitution/> {7}

unless

Sam has been twice elected to the office of President of the USA {8}

FAN: diving further - how the bindings are indicated is flexible

Believing

Sam is /eligible/ to run for President of the USA {1}

is justified by applying

The eligibility requirements in Article II of the /Constitution/ {2}

to

Sam was born in the Commonwealth of Virginia {3}

Sam is 57 years old {4}

Sam has never lived outside of the United States {5}

with

eligible: regarded as fulfilling the necessary criteria or qualifications {6}

constitution: see <https://constitutioncenter.org/interactive-constitution/> {7}

unless

Sam has been twice elected to the office of President of the USA {8}

FAN: diving further - bindings can go first

With

eligible: regarded as fulfilling the necessary criteria or qualifications {6}
constitution: see <https://constitutioncenter.org/interactive-constitution/> {7}

Believing

Sam is /eligible/ to run for President of the USA {1}

is justified by applying

The eligibility requirements in Article II of the /Constitution/ {2}

to

Sam was born in the Commonwealth of Virginia {3}

Sam is 57 years old {4}

Sam has never lived outside of the United States {5}

unless

Sam has been twice elected to the office of President of the USA {8}

FAN: diving further - labels are not restricted to numbers

Believing

Sam is eligible to run for President of the USA {SamEligible}

is justified by applying

The eligibility requirements in Article II of the Constitution {ArtII}

to

Sam was born in the Commonwealth of Virginia {P1}

Sam is 57 years old {P2}

Sam has never lived outside of the United States {P3}

with

eligible: regarded as fulfilling the necessary criteria or qualifications {eli}

constitution: see <https://constitutioncenter.org/interactive-constitution/> {JM}

unless

Sam has been twice elected to the office of President of the USA {2_term_P}

Believing

Sam is /eligible/ to run for President of the USA {1}

is justified by applying

The eligibility requirements from all of the /Constitution/ {2}

to

Sam was born in the Commonwealth of Virginia {3}

Sam is 57 years old {4}

Sam has never lived outside of the USA {5}

Sam has never been President {6}

Sam has never been disqualified from holding office {7}

with

eligible: regarded as fulfilling the necessary criteria or qualifications {8}

constitution: see <https://constitutioncenter.org/interactive-constitution/> {9}

Believing

{3} and {4}

is justified by applying

Inspection by a qualified document authenticator {10}

to

Sam's /birth certificate/ is available to view {11}

with

birth certificate: documentation of Sam's birth obtained\
from the Virginia Department of Health, Office of Vital\
Records {12}

Believing

{5}

is justified by

accepting two independent sources of information {13}

to

Sam's political opponents do not claim she has lived \
outside the USA {14}

Sam's tax returns indicate uninterrupted residency in \
the USA {15}

. . .

Believing

Socrates is mortal

is justified by applying the

AAA-1 syllogism

to

All men are mortal

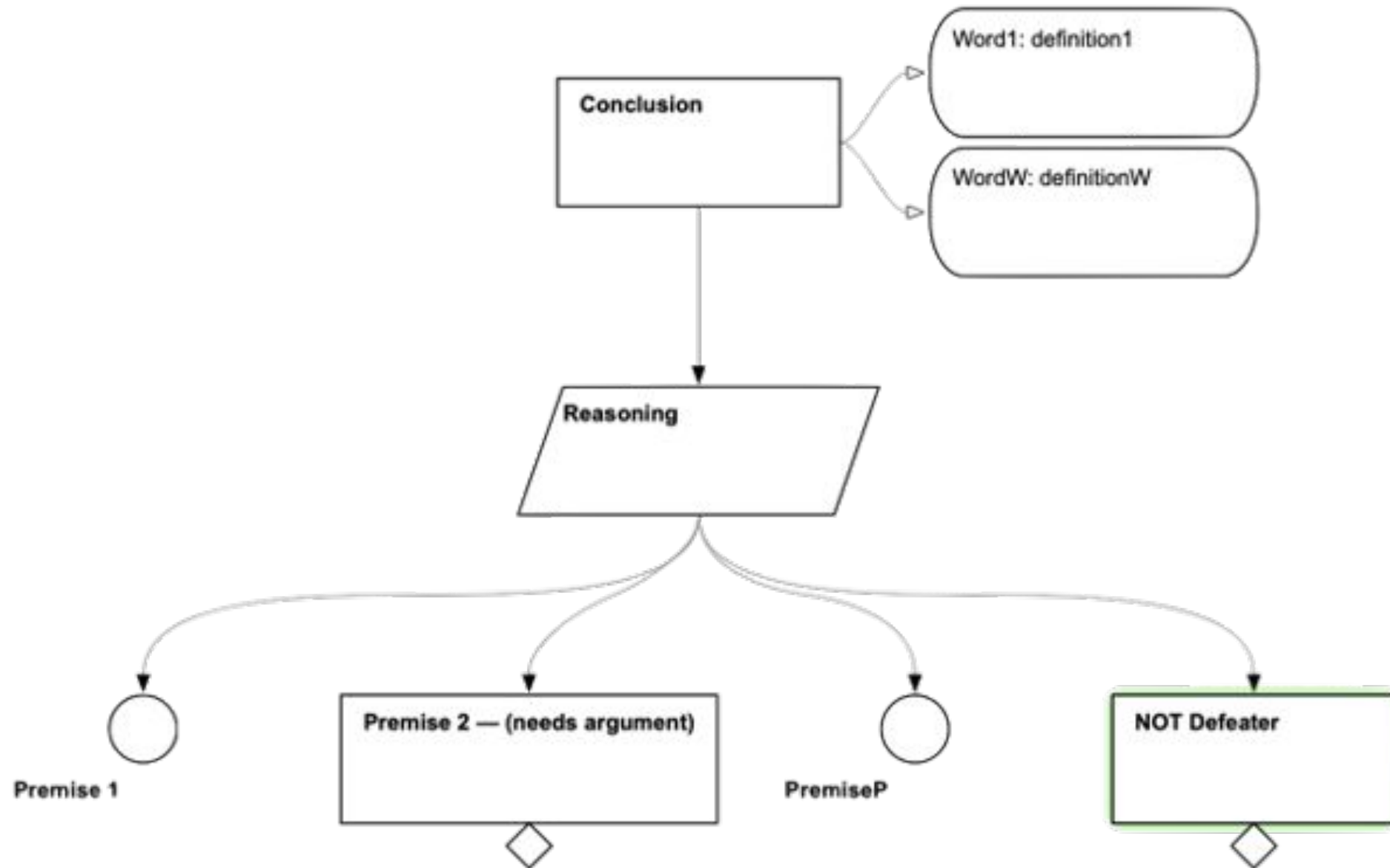
Socrates is a man

Believing

Michael will not attend a SCOTUS argument in April
is justified by applying
modus ponens
to

If SCOTUS postpones April arguments, then Michael\
will not attend a SCOTUS argument in April

SCOTUS postponed April arguments



Believing

Conclusion

is justified by applying

Reasoning

to

Premise 1

Premise 2 {needs-argument}

PremiseP

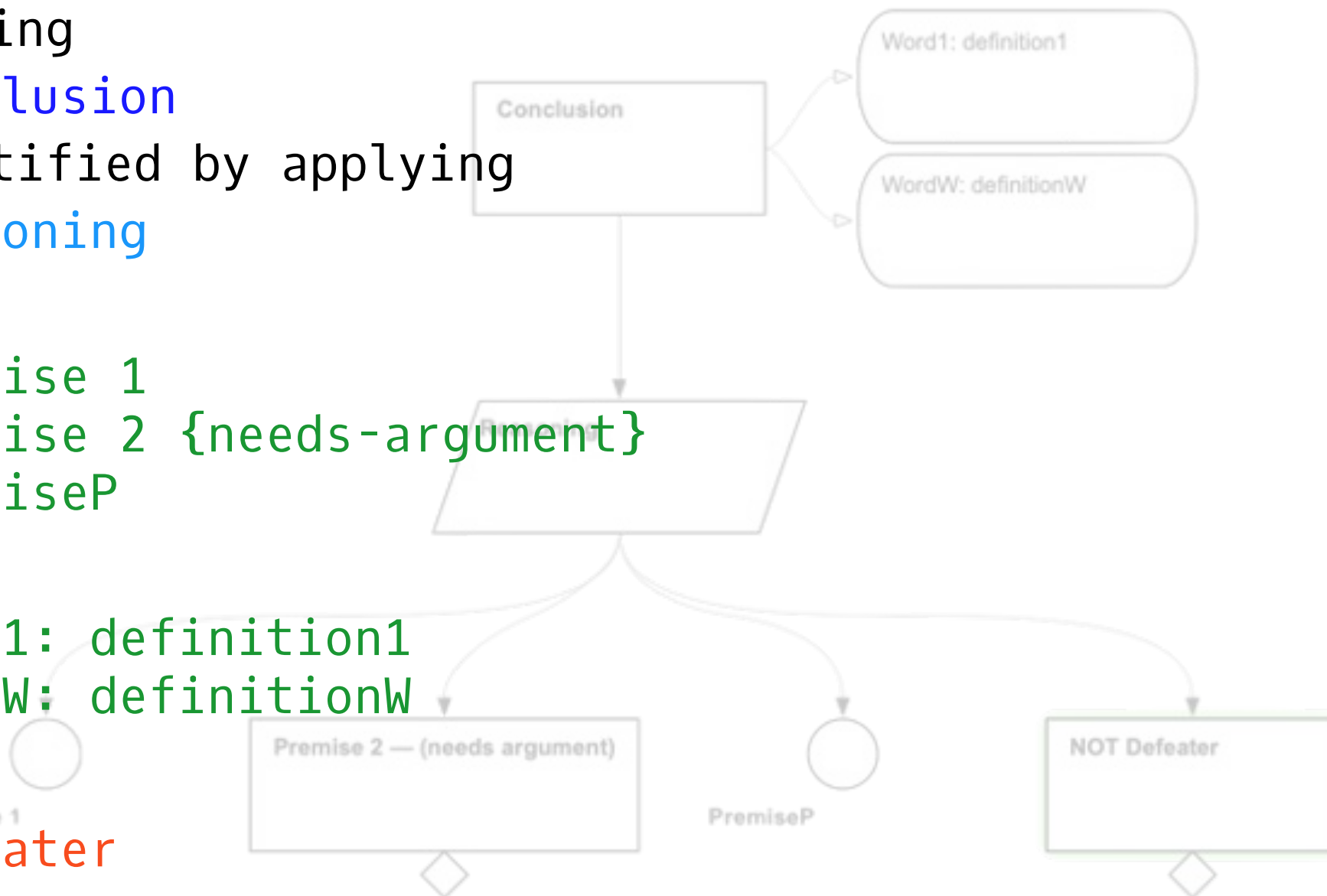
with

Word1: definition1

WordW: definitionW

unless

Defeater



With

safe enough: at least as safe as Jon's dad {8}

special danger: a problem safe driving cannot overcome {9}

Believing

Tim is a */safe enough/* driver to take Jon to the game {1}

is justified by applying

Five independent sources of support for Tim's ability to drive safely are good enough for Jon's dad {2}

to these premises

Tim has satisfied all legal requirements for driving {3}

Tim has not been in an accident {4}

Nothing untoward is going on in Tim's life that might cause him to drive less well than usual {5}

Tim has a good reputation for driving {6}

Tim's car does not pose any */special danger/* {7}

Believing

Tim has satisfied all legal requirements for driving {3}

is justified by applying

Having a driver's license is sufficient evidence of legality {10}

to these premises

Tim has a driver's license {11}

unless

The license is a fake. {12}

Believing

Tim has not been in an accident {4}

is justified by applying

Three available sources of accident information {13}

to

Common knowledge says Tim hasn't been in an accident {14}

DMV records do not show any accidents for Tim {15}

Tim's insurance records are accident-free {16}

Believing

Nothing untoward is going on in Tim's life that might cause him to drive less well than usual {5}

is justified by applying

The belief that something untoward would show up in relationships, academics, or distractions {17}

to these premises

Tim is not currently in any fights, disagreements, or arguments with friends or classmates {18}

Tim's academic life will not affect his driving {19}

Tim has no big life decisions that may distract him {20}

Believing

Tim has a good reputation for driving {6}

is justified by

inferring a positive from the absence of a negative {21}

to

Neither Jon nor Jon's dad nor Jon's mom have heard any negative comments about Tim's driving {22}

Believing

Tim's car does not pose any */special danger/* {7}

is justified by

Jon's dad's knowledge of cars {23}

to the premises

The model of the car has a superior reliability rating {24}

The car is 3 years old {25}

The car has been regularly serviced according to the manufacturer's recommendations {26}

Believing

Subsystems SAM and IM both possess *Innocuity* {1}

is justified by applying

the principle of conjunction {2}

to

SAM possesses *Innocuity* {3}

IAM possesses *Innocuity* {4}

SAM and IAM are *independent* {5}

with

Innocuity: definition from OP description \

<<https://hdl.handle.net/2060/20190029284>> {6}

independent: to be defined {7}

Believing

SAM possesses *Innocuity* {3}

is justified by applying

the meaning of *Innocuity* {8}

to

All parts of SAM are required by the *DiB* {9}

with this binding

DiB: abbreviation for "defined intended behavior" \

from the OP description <<https://hdl.handle.net/2060/20190029284>>) {10}

Believing

IAM possesses *Innocuity* {4}

is justified by applying

Yet to be determined reasoning {10}

to an unknown number of premises but we'll guess three for now

Premise-1 {11}

Premise-2 {12}

Premise-3 {13}

Believing

SAM and IAM are *independent* {5}

is justified through

Satisfying independence objectives from *standard*

to this premise

Results show compliance with chosen *standard*

with

standard: see <https://abc.def.com/the-standard>



additional details

Rule 1. FAN is not case-sensitive.

Rule 2. In these rules the word CHUNK denotes a single distinct bit of text. The manner of separation of chunks depends on the form of the document.

Where typesetting features are available, whitespace may be used to separate chunks. In plain text files, lines might be terminated by a backslash (\) character to indicate that they are part of a CHUNK that includes the subsequent line. BEGINNING OF A CHUNK denotes the first non-whitespace character.

Rule 3. The words **believing**, **is**, **to**, **with**, **unless**, and **end** are keywords, with special meaning whenever they appear at the BEGINNING OF A CHUNK. Any additional text on the CHUNK after the keyword is ignored.

Rule 4.a. A CONCLUSION BLOCK consists of a CHUNK containing the keyword **believing** followed by a single CHUNK.

Rule 4.b. A REASONING BLOCK consists of a CHUNK containing the keyword **is** followed by a single CHUNK.

Rule 4.c. A PREMISE BLOCK consists of a CHUNK containing the keyword **to** followed by one or more CHUNKs. The PREMISE BLOCK ends before the first appearance of the keywords **with**, **unless**, **end**, or **believing**.

Rule 4.d. A BINDING BLOCK consists of a CHUNK containing the keyword **with** followed by one or more CHUNKs, with each following CHUNK containing text, a colon (:), and more text. The BINDING BLOCK ends before the first appearance of the keywords **unless**, **end**, or **believing**.

Rule 4.e. A DEFEATER BLOCK consists of the keyword **unless** followed by one or more CHUNKs. The BINDING BLOCK ends before the first appearance of the keywords **with**, **end** or **believing**.

Rule 5. A word or phrase that appear to the left of a colon (:) in a BINDING BLOCK is written everywhere else in a way that distinguishes it from other text. Note: Where typesetting features are available, this might be accomplished with italicization or underlining. In plain text, such phrases might appear between slash (/) characters.

Rule 6. A valid FAN argument consists of a CONCLUSION BLOCK , followed by a REASONING BLOCK , followed by a PREMISE BLOCK, followed optionally in either order by a BINDING BLOCK and a DEFEATER BLOCK. More than one FAN argument may be contained in the same document. Also, a document may begin with a BINDING BLOCK.

Rule 7. Each CHUNK not beginning with a keyword may end with an optional label within curly braces ({}). The label provides a way to refer to a CHUNK elsewhere within an argument.

Rule A. The non-keyword CHUNK in a CONCLUSION BLOCK must be a proposition (that is, a statement to which attributing a truth value is appropriate).

Rule B. Each non-keyword CHUNK in a PREMISE BLOCK and in a DEFEATER BLOCK must be a proposition.

Rule C. The non-keyword CHUNK in a REASONING BLOCK should explain why the content of the PREMISE BLOCK provides sufficient justification for believing the content of the CONCLUSION BLOCK .

Rule D. For each non-keyword CHUNK in a BINDING BLOCK the relationship between the text to the left of the colon (LHS) and the text to the right of the colon (RHS) should satisfy one of these constraints:

- 1) The RHS provides a definition or description for the LHS.
- 2) The LHS provides a name for to an entity in the real world described or referenced by the RHS.
- 3) The RHS provides a reference to an external document in which the LHS is defined or described.

Rule E: A binding applies not only to the argument in which it first appears, but also to all arguments in the same document. If a given LHS appears in more than one BINDING BLOCK in a document, it must be bound to the same RHS each time.