
The Overarching Properties & Overarching Properties Related Arguments

— Part 2 —

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Batting order

1. Preliminaries
2. The Overarching Properties (OPs) : philosophy & history
3. The Overarching Properties: details
4. **Argument:** terminology and principles
5. **Argument:** assessment
6. **Argument:** the Friendly Argument Notation (FAN)
7. **OP Related Arguments (OPRAs):** uniqueness
8. **OPRAs:** assessment
9. **Loose ends**



People generally quarrel
because they cannot argue.

G. K. Chesterton



ARGUMENT

your attempt to convince others to **BELIEVE** a **CONCLUSION**
through **REASONING** from one or more **PREMISES**



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BELIEVE

accept as true



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the statement you want your audience to **BELIEVE**

BELIEVE

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PREMISE

a statement you think your audience **BELIEVES**

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REASONING

why you think the **PREMISES** should cause your audience to **BELIEVE** your **CONCLUSION**

BELIEVE

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A **BINDING** associates
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An **ATOMIC ARGUMENT** consists of a single **CONCLUSION** together with its immediate **REASONING**, **PREMISES**, and **BINDINGS** (if any).

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A **COMPOUND ARGUMENT** is an **ARGUMENT** consisting of more than one **ATOMIC ARGUMENT**.

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A **COGENT ARGUMENT** rationally justifies **BELIEVING** its **CONCLUSION**.



A **COMPOUND ARGUMENT** is an **ARGUMENT** consisting of more than one **ATOMIC ARGUMENT**.



A COGENT ARGUMENT
rationally justifies **BELIEVING**
its **CONCLUSION**
to the required standard
of confidence.



The precept of **EFFICACY** reminds us that *you need ARGUMENT only when you need ARGUMENT.*

The precept of **PLAUSIBILITY** reminds us that *presuppositions predetermine plausibility.*

The precept of **INDUCTION** reminds us that *the ARGUMENTS with which we will concern ourselves are uniformly INDUCTIVE ARGUMENTS.*

The precept of **CERTAINTY** reminds us that *certainty is certainly not possible.*

The precept of **LOCALITY** reminds us that *COMPOUND ARGUMENTS are always assessed one ATOMIC ARGUMENT at a time.*

The precept of **DEPTH** reminds us to *descend no deeper than necessary.*

The precept of **CHANGE** reminds us that *ARGUMENTS are living structures.*



K&M's Argument Maxims

M 0 Presuppositions predetermine plausibility.

K&M 1 You need argument only when you need argument.

K&M 2 Certainty is certainly not possible.

K&M 3 All arguments are local.

K&M 4 Evidence is not special.

M n Numbers are evil.



O

presuppositions

predetermine

plausibility



1

You
need
argument

only

when
you need
argument



2



3



The **purposes** of argument for us are to

provoke careful thinking

&

promote effective communication



Batting order

1. Preliminaries
2. **The Overarching Properties (OPs)** : philosophy & history
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5. **Argument**: assessment



The two parts of our method

For ATOMIC ARGUMENTS
the SPRY questions

For COMPOUND ARGUMENTS
iTest

See *A Primer on Argument Assessment*
<https://ntrs.nasa.gov/citations/20210022807>



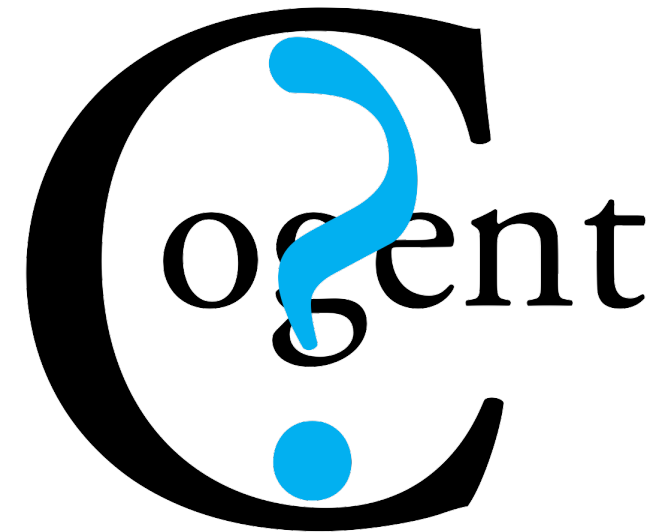
ATOMIC ARGUMENT Assessment Questions

S Is the syntax proper?

P Are the PREMISES acceptable?

R Is the REASONING acceptable?

Y Is saying “Yes” to the CONCLUSION justified?



ATOMIC ARGUMENT Assessment Questions

S Is the syntax proper? **Yes**

P Are the PREMISES acceptable? **Yes**

R Is the REASONING acceptable? **Yes**

Y Is saying “Yes” to the CONCLUSION justified? **Yes**



*A **SPRY ARGUMENT** is a **COGENT ARGUMENT**.*



S Is the syntax proper?

- a. Is there a single **CONCLUSION** that is stated in the form of a proposition?
- b. Is there a statement of **REASONING**?
- c. Is there at least one **PREMISE**?
- d. Is each **PREMISE** stated in the form of a proposition?

- f. Does a **BINDING** exist for each term or phrase used in the **CONCLUSION**, **REASONING**, & **PREMISES** that does not have a well-known, unambiguous definition?
- g. Does a proper **BINDING** exist for each reference to an external artifact?



P Are the PREMISES acceptable?

a. Is each PREMISE BELIEVABLE?

b. Is each PREMISE relevant to the CONCLUSION?



P Are the PREMISES acceptable?

a. Is each PREMISE BELIEVABLE? To be BELIEVABLE the PREMISE must fall into one of these categories:

- (a) expresses a proposition that is 'universally' accepted as true
- (b) expresses a proposition that is accepted as true within the relevant domain
- (c) is supported by an ARGUMENT (provisionally presumed to be COGENT)
- (d) is supported by external artifacts that are accepted within the domain as being sufficient to establish its truth
- (e) at a later stage of ARGUMENT development, will fall into category (c) or (d)
- (f) is an assumption accepted by all stakeholders and clearly identified as such

b. Is each PREMISE relevant to the CONCLUSION?



R Is the REASONING acceptable?

a. Is the REASONING relevant?

b. Is the REASONING consistent with current knowledge?

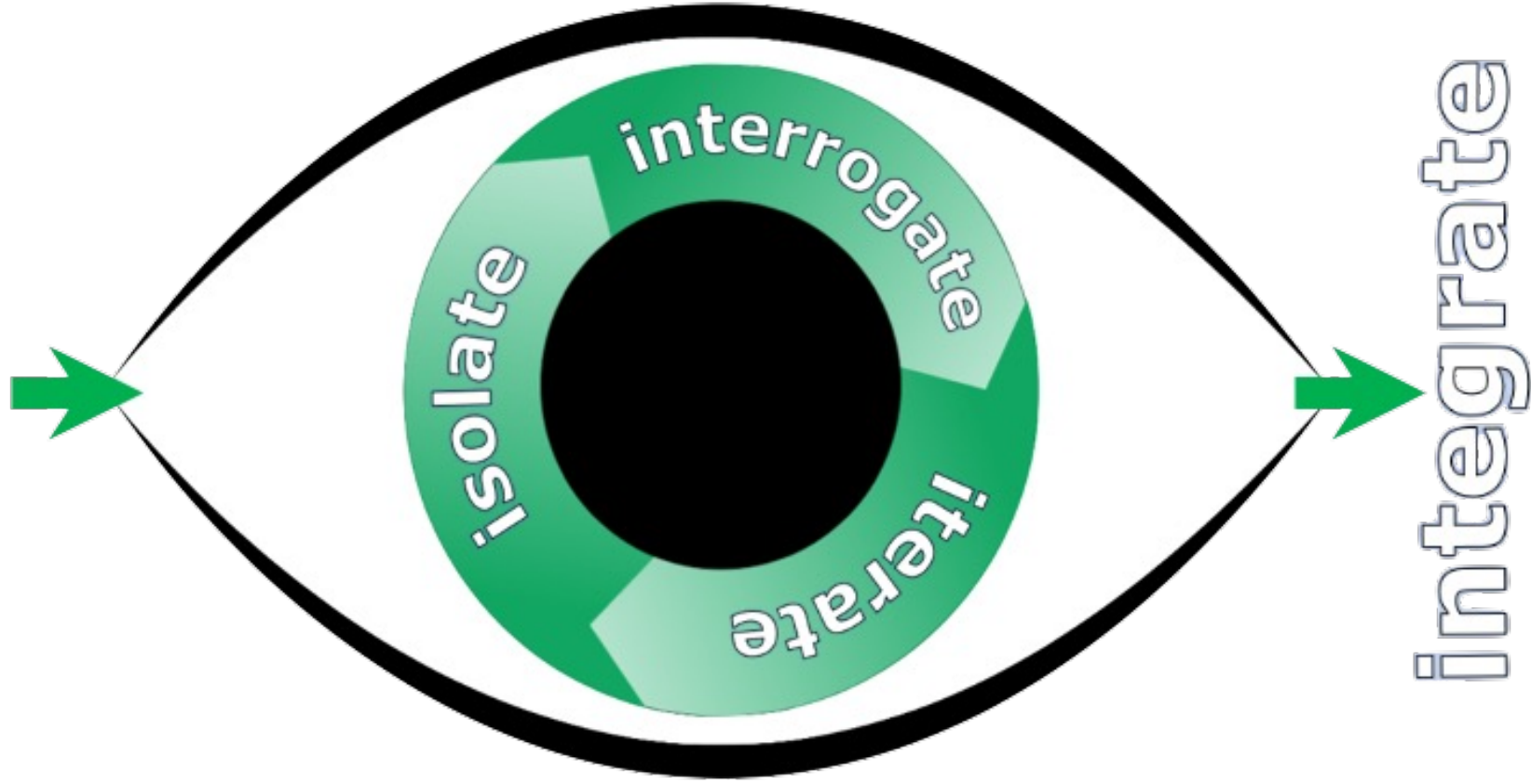


Y Is saying “Yes” to the conclusion justified?

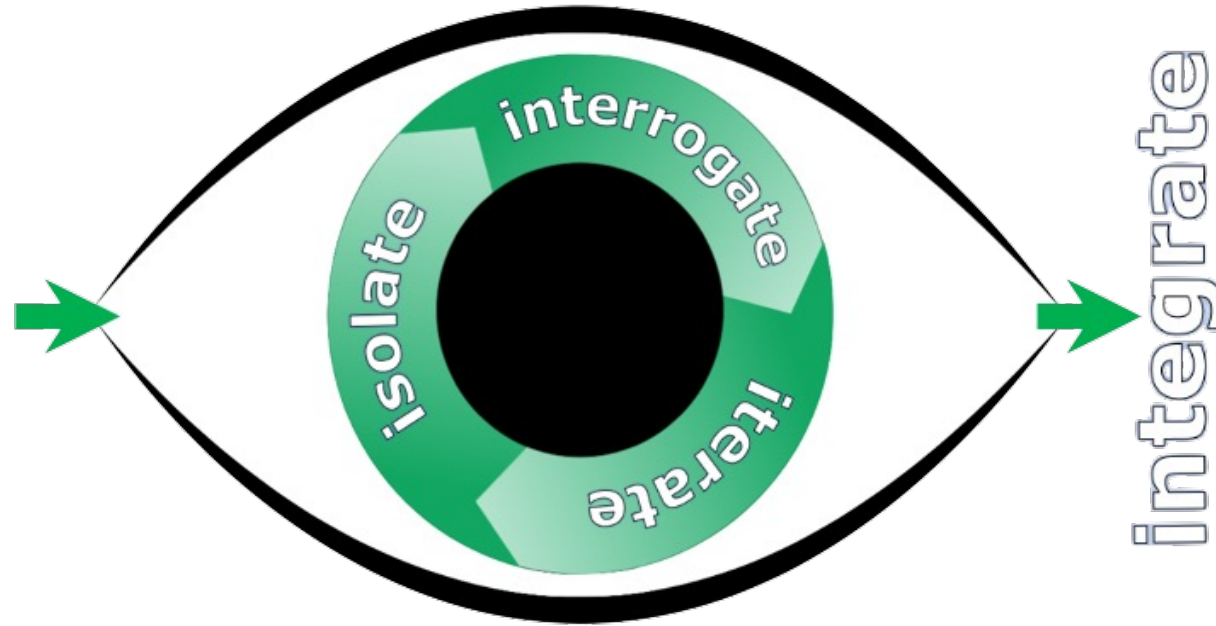
- a. Is the required level of confidence known?
- b. Does the ARGUMENT engender the required level of confidence?



iTest



iTest



I. Isolate one ATOMIC ARGUMENT

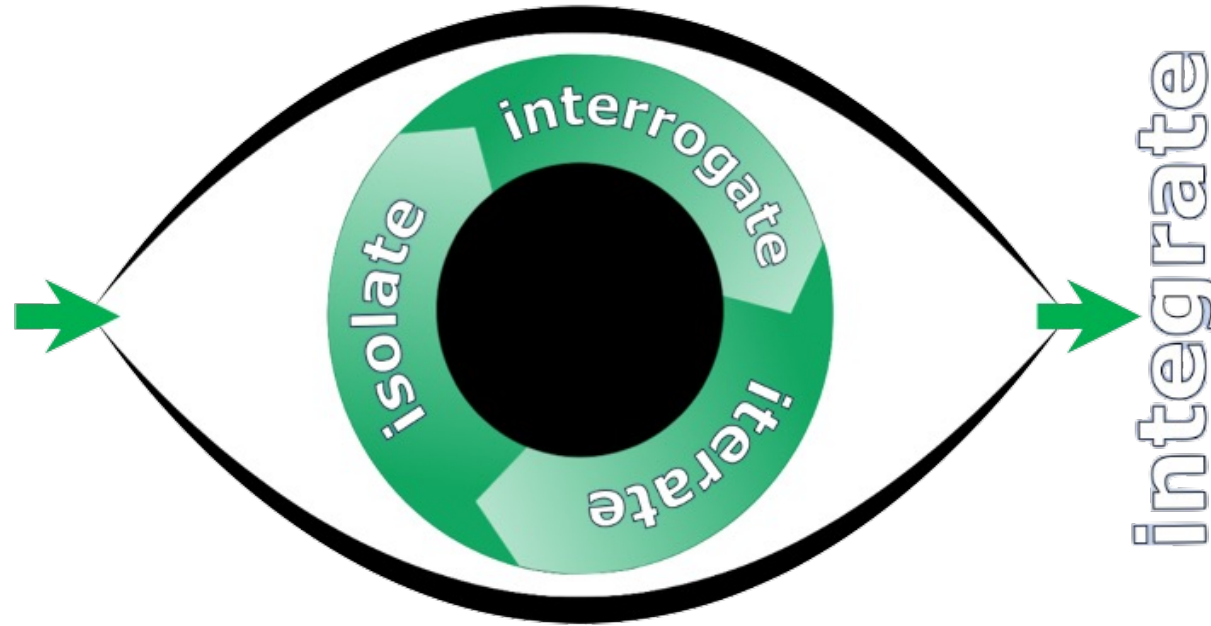
II. Interrogate it as an ATOMIC ARGUMENT

III. Iterate until all ATOMIC ARGUMENTS have been assessed

IIII. Integrate the individual assessments



iTest



I. **Isolate** one ATOMIC ARGUMENT

II. **Interrogate** it as an ATOMIC ARGUMENT

III. **Iterate** until all ATOMIC ARGUMENTS have been assessed

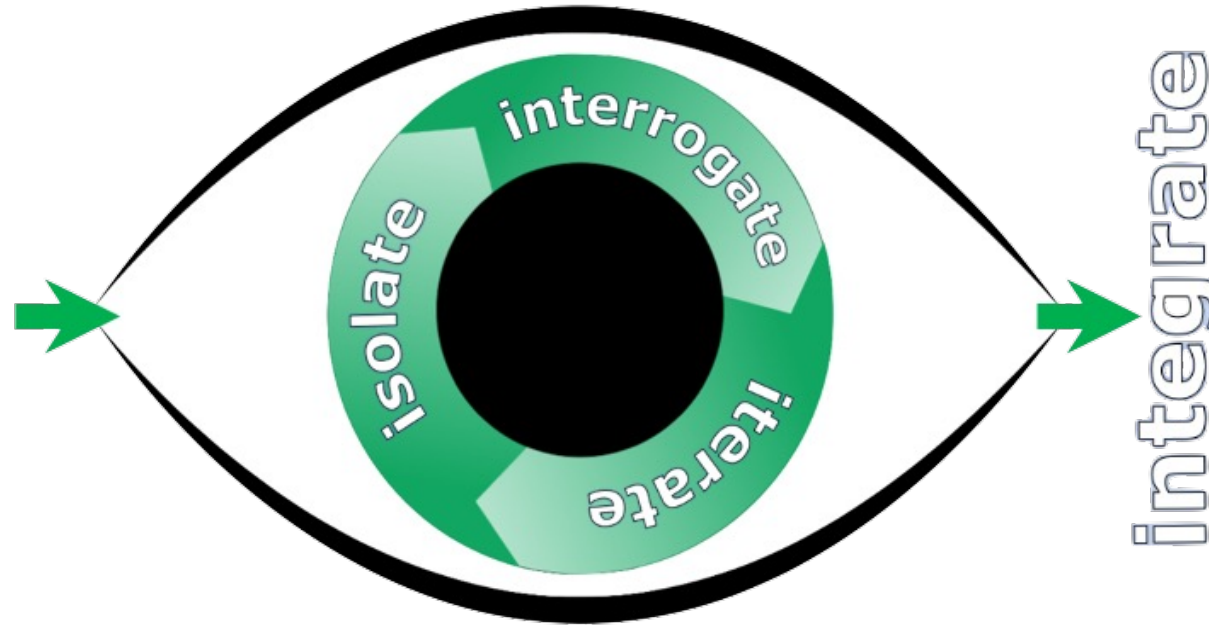
III. **Integrate** the individual assessments by answering these questions:

A. Are all ATOMIC ARGUMENTS assessed as COGENT?

B. Does every path through the COMPOUND ARGUMENT terminate in BELIEVED PREMISES?



iTest



I. Isolate one ATOMIC ARGUMENT

II. Interrogate it as an ATOMIC ARGUMENT

III. Iterate until all ATOMIC ARGUMENTS have been assessed

III. Integrate the individual assessments by answering these questions:

A. Are all ATOMIC ARGUMENTS assessed as COGENT?

B. Does every path through the COMPOUND ARGUMENT terminate in BELIEVED PREMISES?

NO

1. For each non-COGENT ATOMIC ARGUMENT, list its CONCLUSION.
2. For each listed CONCLUSION, find all ATOMIC ARGUMENTS for which it serves as a PREMISE. Note that each such PREMISE will have been identified as falling into BELIEVABILITY category (c).
3. Change the PREMISE'S BELIEVABILITY from category (c) to "no."
4. Reassess the COGENCY of the ARGUMENT in which the PREMISE appears.
5. Repeat until no new non-COGENT ARGUMENTS are revealed.



Syntax proper?

Propositional CONCLUSION, PREMISES?
Explicit REASONING?
At least one PREMISE?
BINDINGS for terms and artifacts?

PREMISES acceptable?

BELIEVABLE?
Relevant?

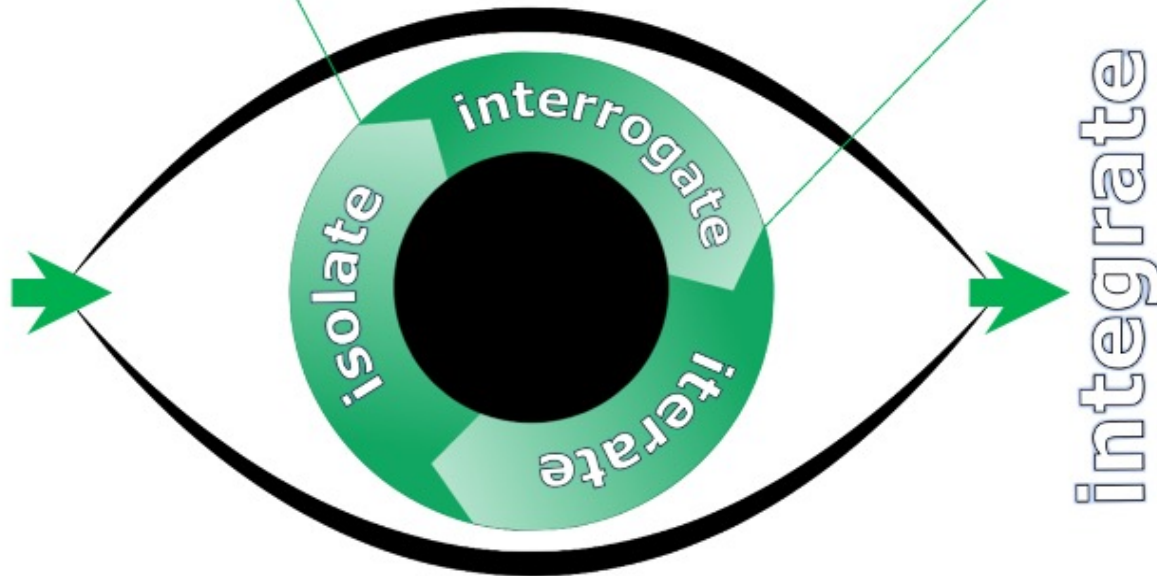
- (a) universally accepted?
- (b) domain accepted?
- (c) ARGUMENT supported?
- (d) artifact supported?
- (e) (c) or (d) later?
- (f) assumption accepted?

REASONING acceptable?

Relevant?
Consistent?

Yes justified?

Required confidence known?
Confidence engendered?



ATOMIC ARGUMENTS COGENT?

Terminal PREMISES BELIEVED?



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far



Believing

CONCLUSION

is justified by applying

REASONING

to these premises

PREMISE-1

[**PREMISE-2 . . .**

PREMISE-n]

[with these bindings

BINDING-1 . . .

BEINDING-m]

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

Sam has never been President of the USA

with these bindings

<eligible>: regarded as fulfilling the necessary criteria or qualifications

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



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 {SamVa}
Sam is 57 years old {Sam57}
Sam has never lived outside of the United States {SamUS}
Sam has never been President of the USA {SamNO}
with these bindings
<eligible>: regarded as fulfilling the necessary
criteria or qualifications
<Constitution>: see [https://constitutioncenter.org/
|interactive-constitution/](https://constitutioncenter.org/interactive-constitution/)

Believing
{SamVa} Sam was born in the Commonwealth of Virginia
is justified by applying
inspection
to
Sam's birth certificate lists Roanoke as place of birth.

Believing
{Sam57} Sam is 57 years old
is justified by applying
inspection
to
Sam's birth certificate lists 1965 as year of birth.

Believing
{SamNO} Sam has never been President of the USA
is justified by applying
conjunction
to these premises
The US Archives maintains the official list of all
US presidents who have ever served.
Sam's name is not on the list.

Believing
{SamUS} Sam has never lived outside of the United States
is justified by
. . .
to these premises
. . .



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7. **OP Related Arguments (OPRAs)**: uniqueness

