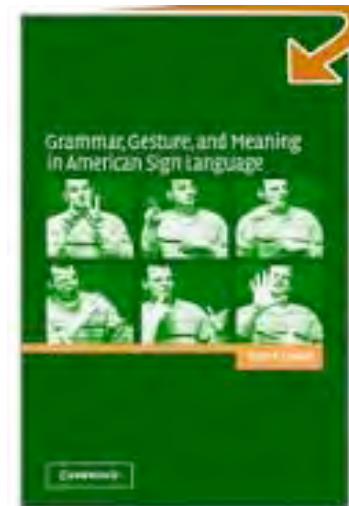
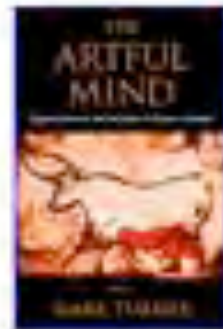
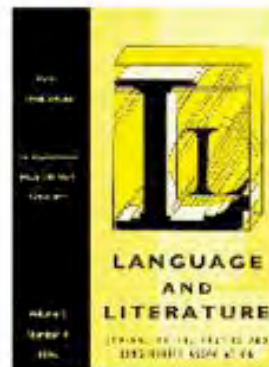
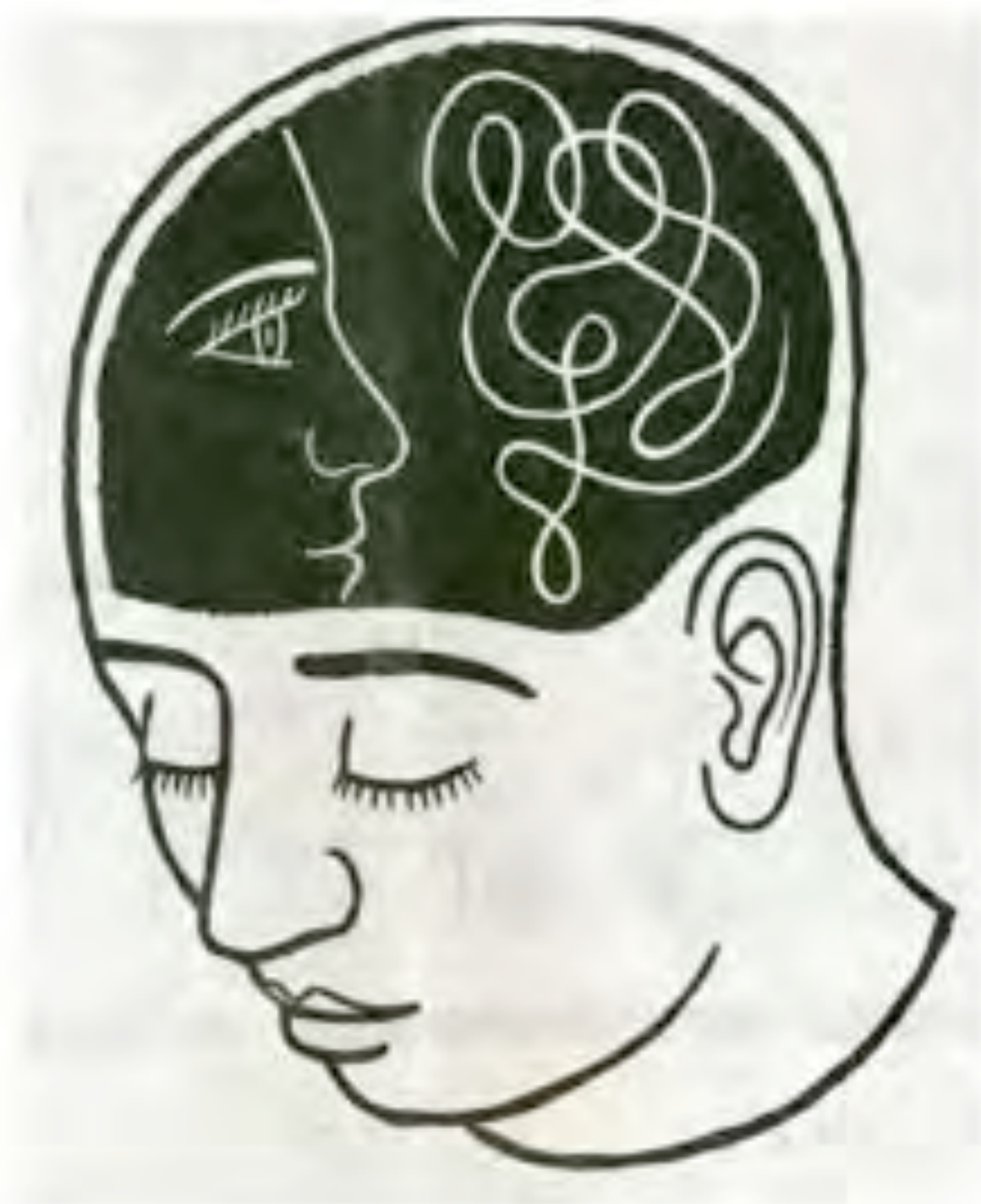


Mental spaces and conceptual blending

<http://mentalspace.net>

<http://blending.stanford.edu>





Hidden behind **simple** words
and **everyday** language are
vast **conceptual networks**
manipulated **unconsciously**
through the activation of
powerful neural circuits.

Importantly, thought and language are **embodied**.

Conceptual structure arises from **our sensorimotor experience** and the neural structures that give rise to it.

Which is harder for us to do?

Program a computer to play chess at the grand master level

or

Program a computer to have language as good as a three year old

- Language is hard
- Language is more than the words

Levels of control

High-level



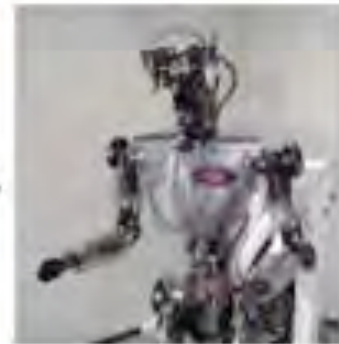
VS.



Low-level



VS.



- language is only the tip of the iceberg of meaning construction
- meaning construction operates in many areas of human activity: art, mathematics, religion, technology, poetry, ...
- conceptual mappings are the same for all these superficially different areas of human thought and action
- therefore linguistics sheds light on general human thinking, and conversely, the study of meaning construction in other areas sheds light on linguistics

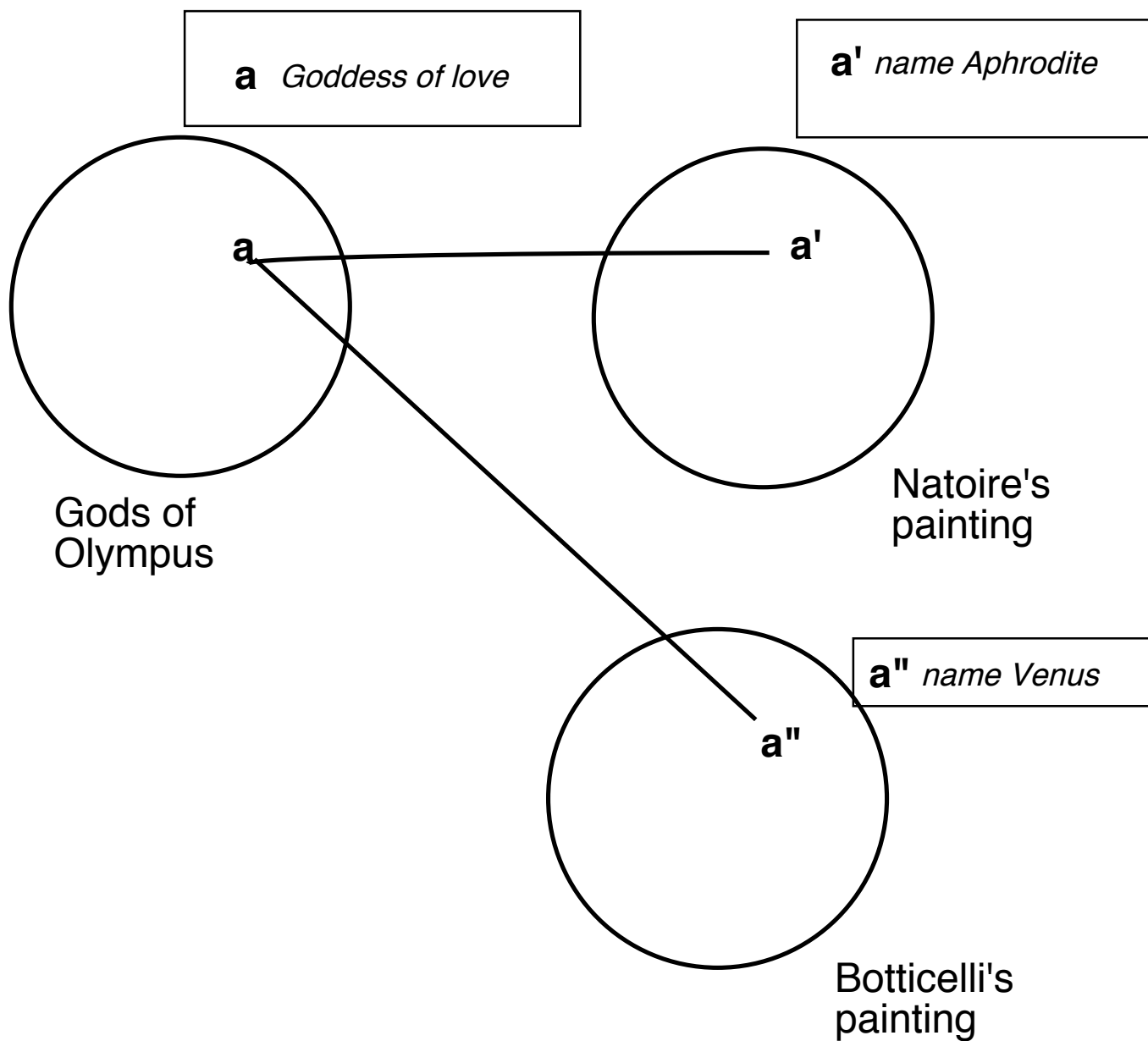
Mental Spaces

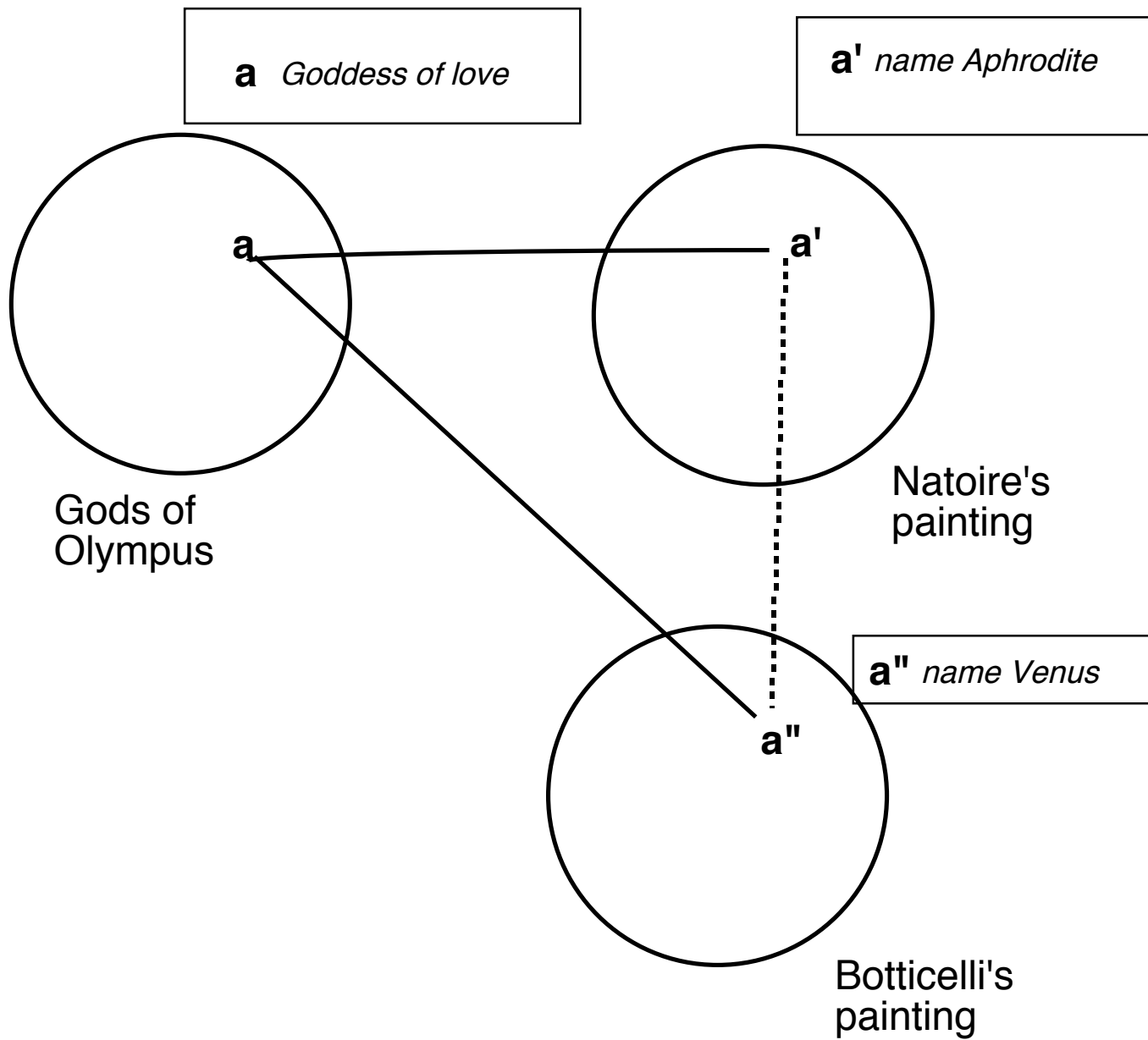
Mappings

- Correspondences between elements and relationships in different mental spaces
 - Clark Kent & Superman
 - Sean Connery & James Bond
 - Baby Georgie & President G.W. Bush
 - Goddess of love & Aphrodite & Venus & Lise & Isabella
- Based on various sorts of relationships
 - Identity
 - Analogy
 - Representation
 - Cause-Effect









b *name Lise
model*

a' *name Aphrodite*

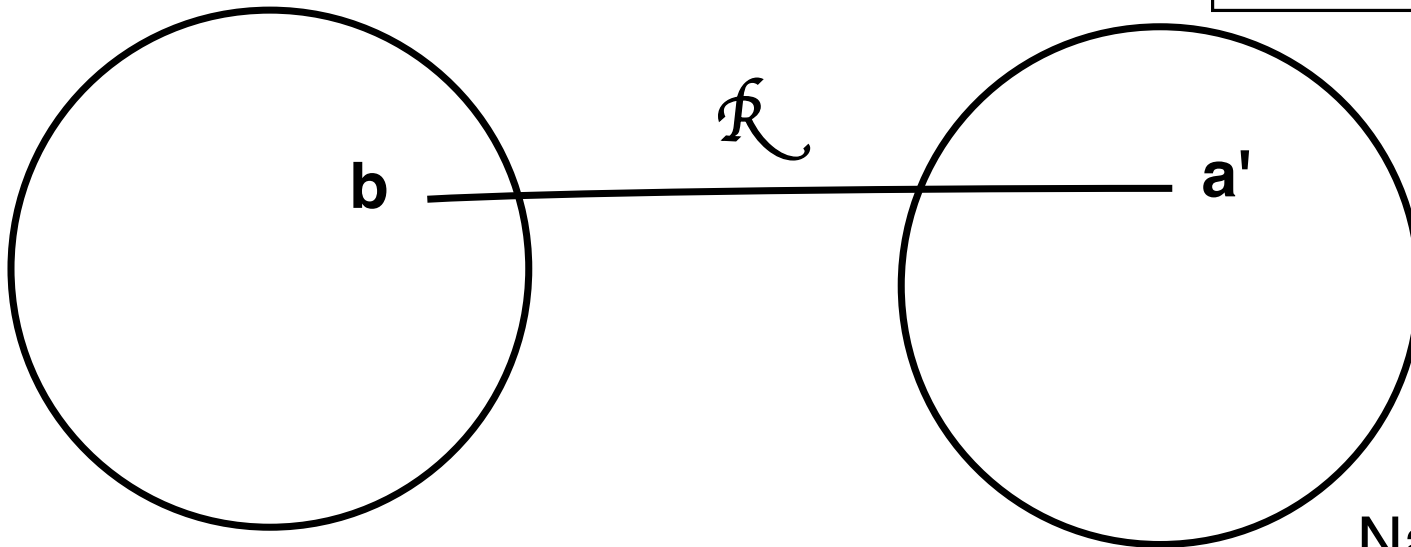
\mathcal{R}

b

a'

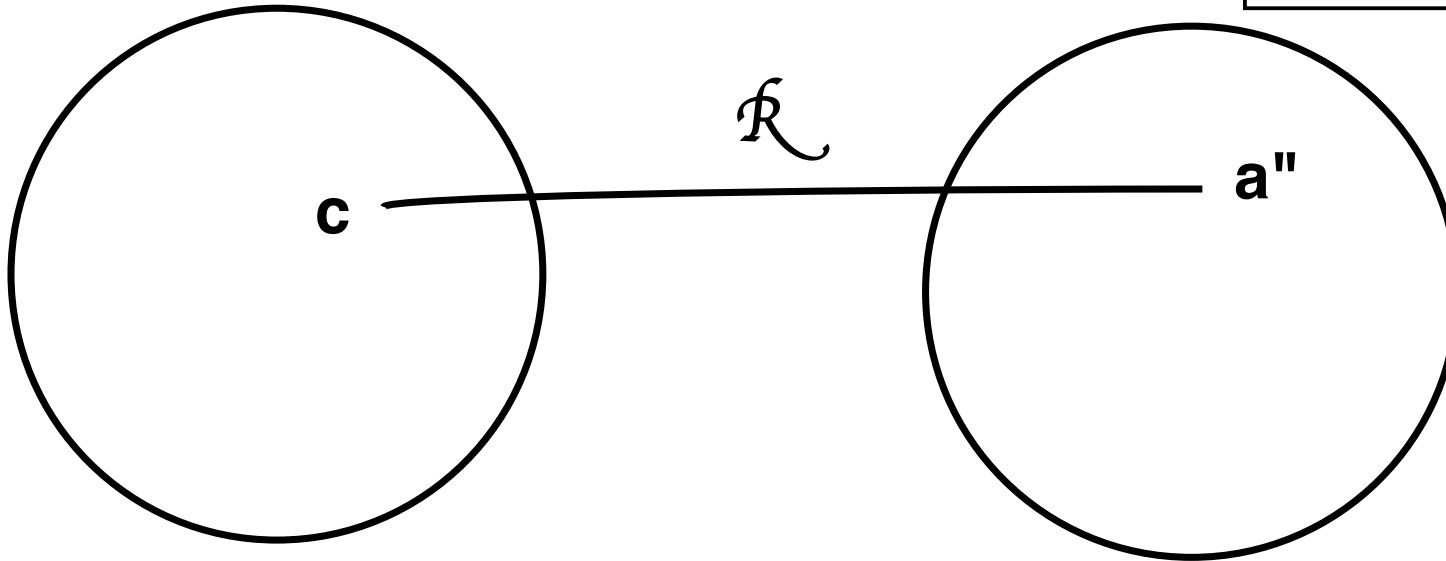
Artist's
studio

Natoire's
painting



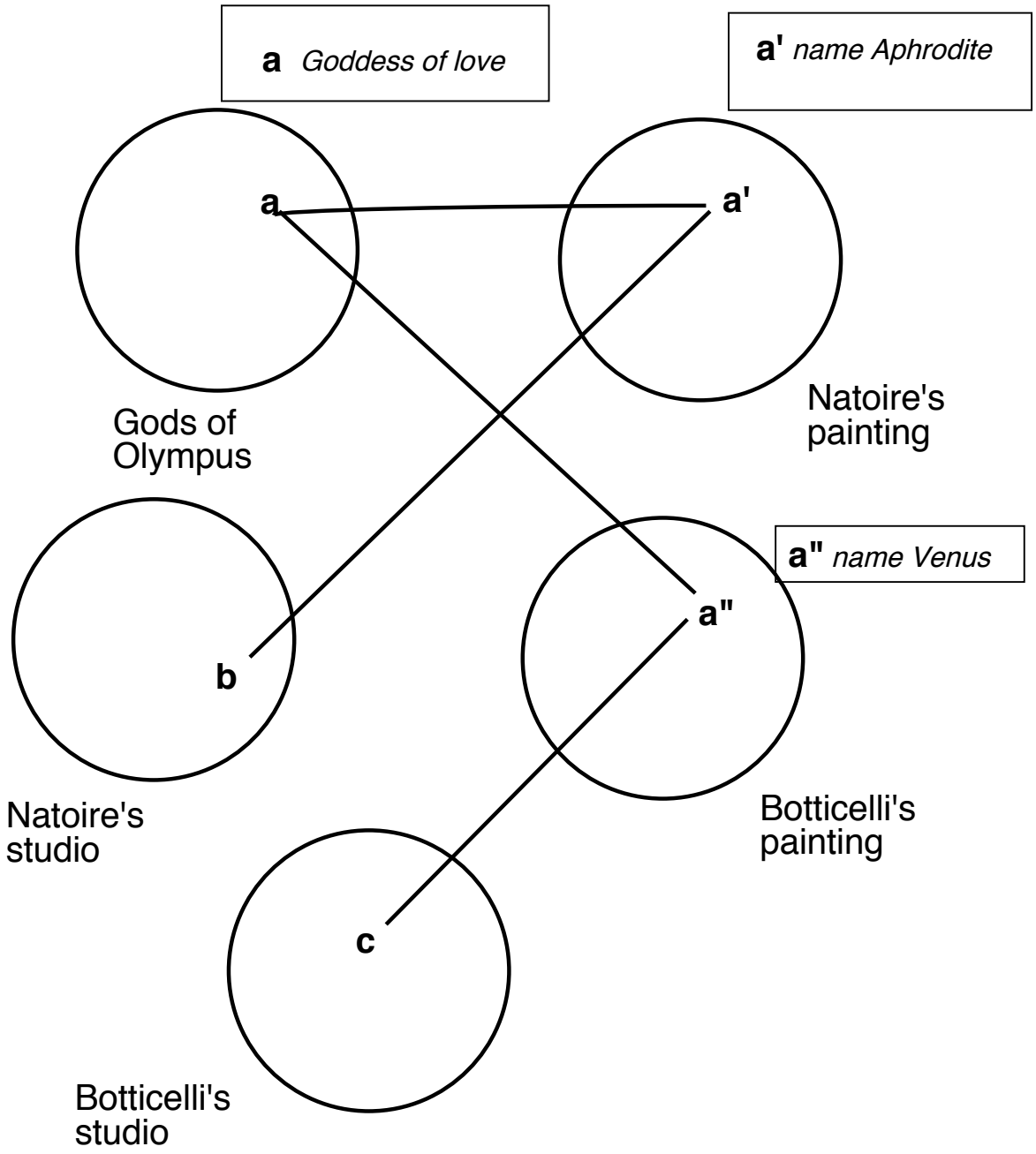
c *name Simonetta
model*

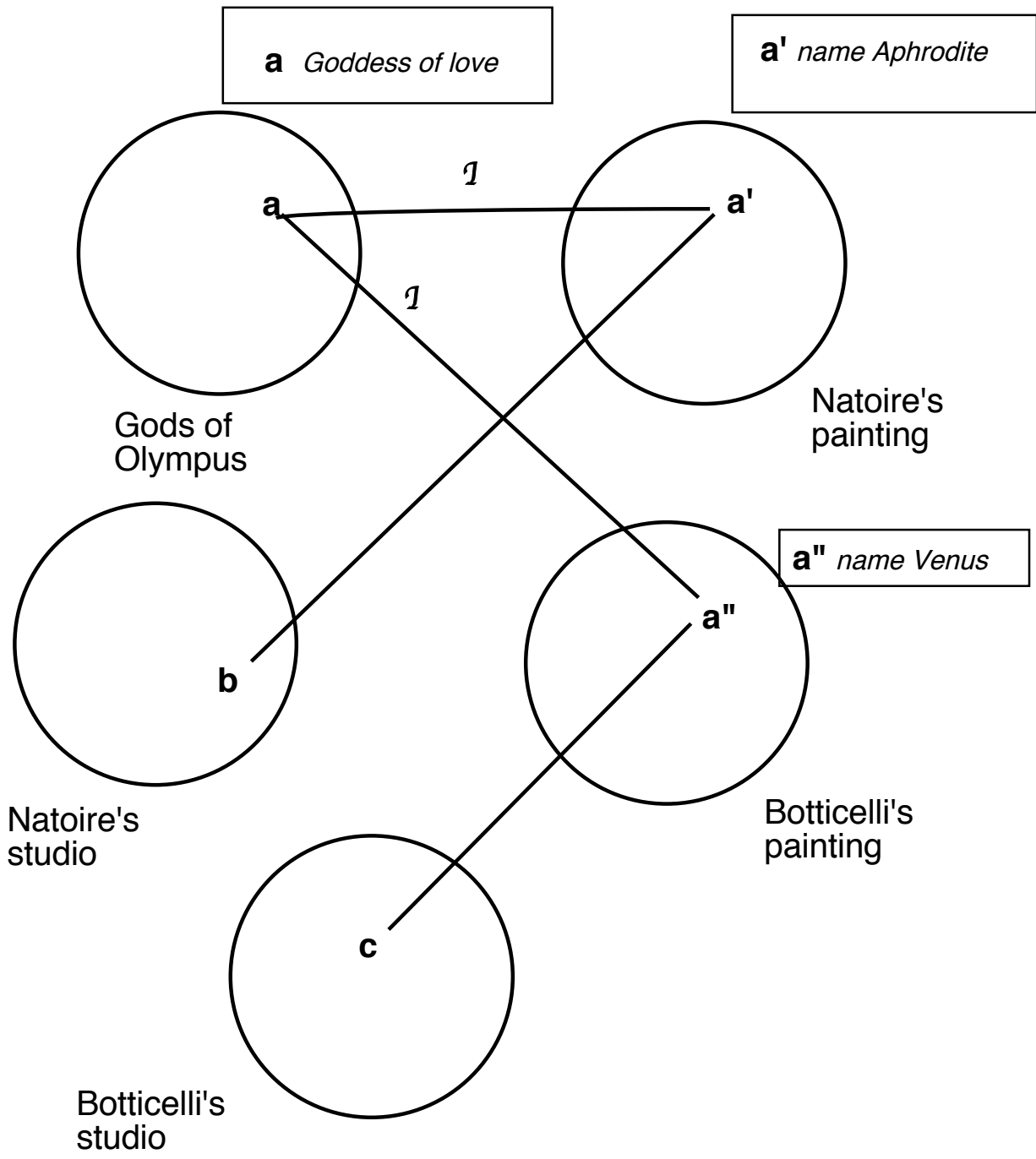
a'' *name Venus*

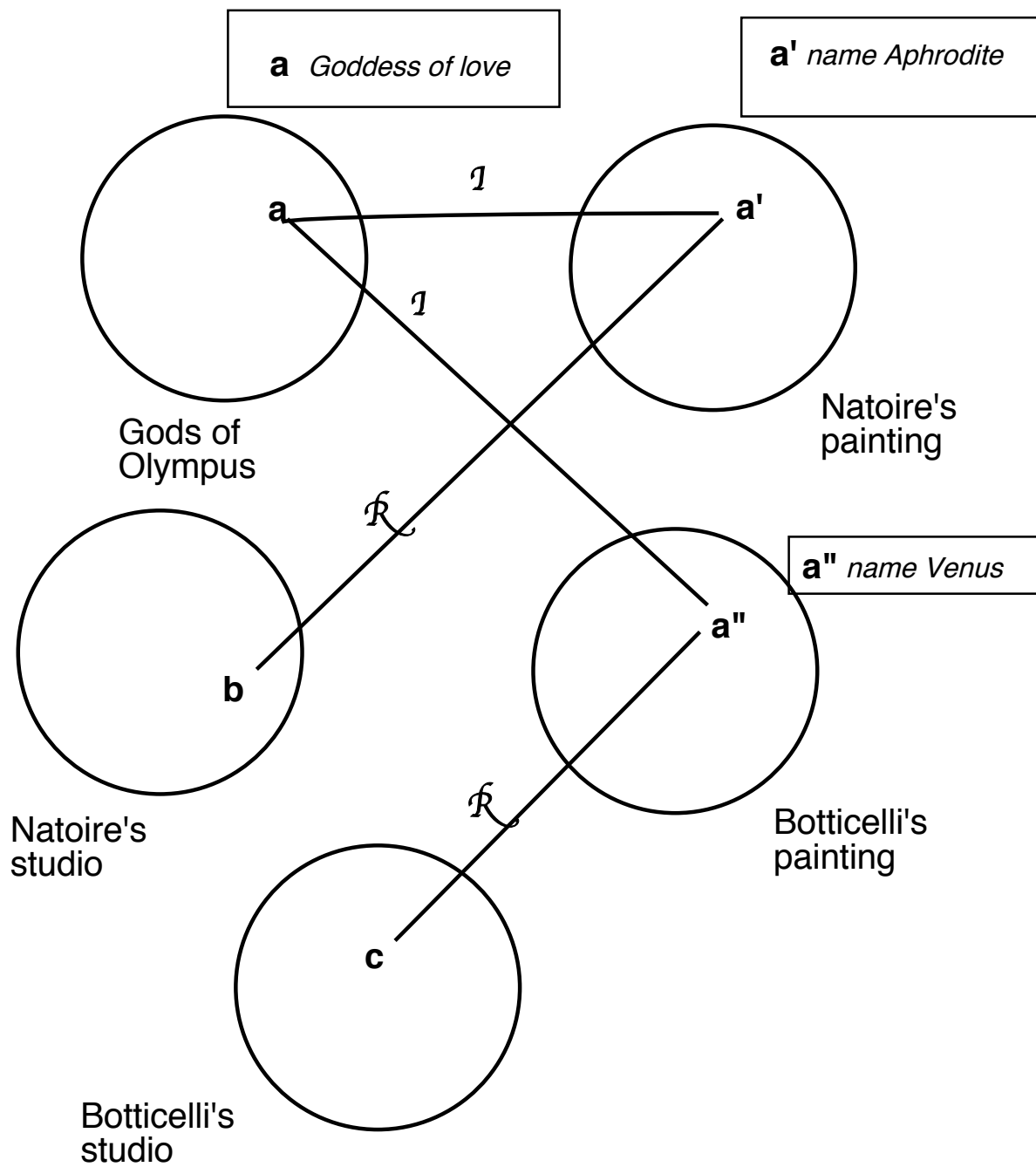


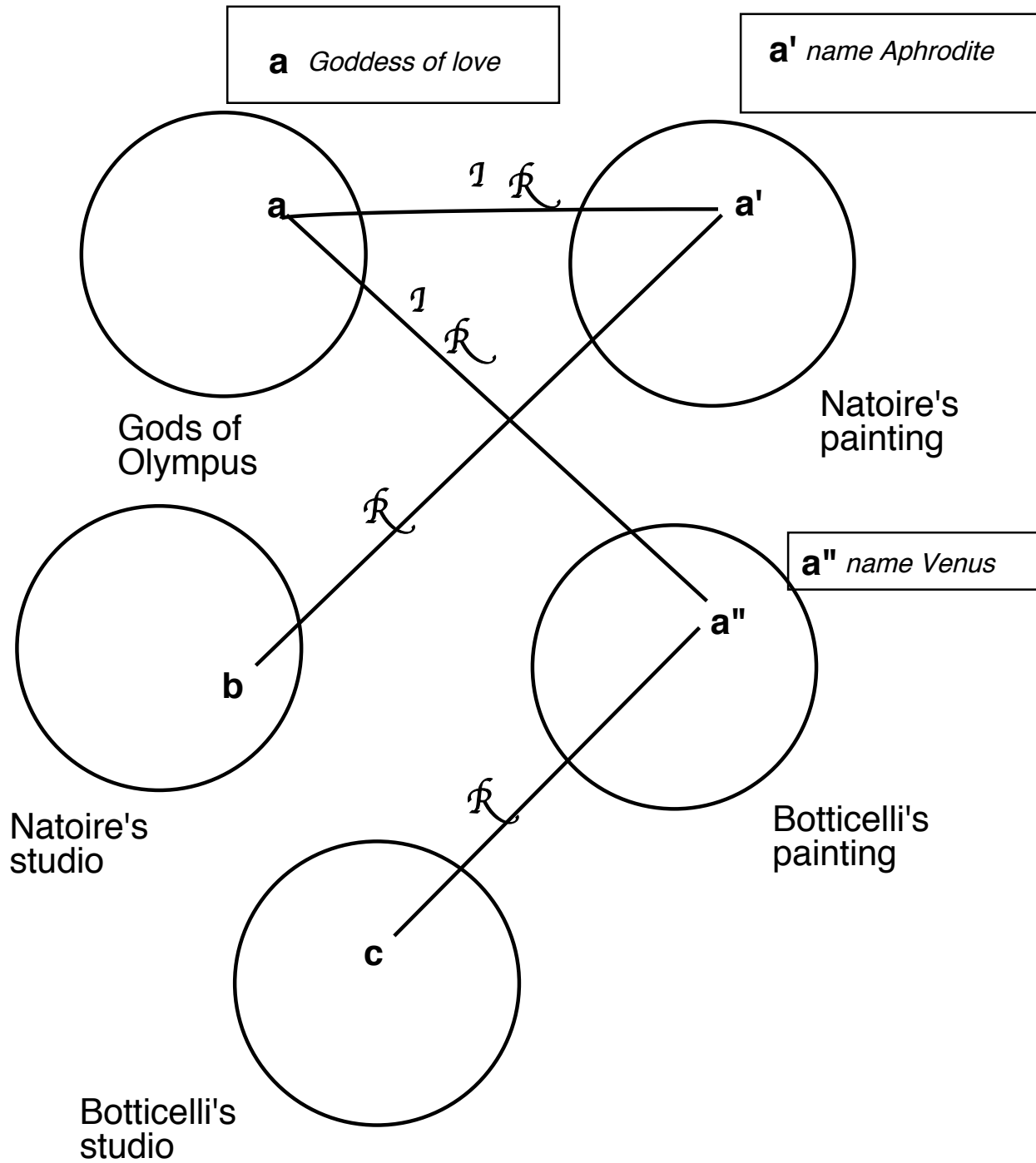
Artist's
studio

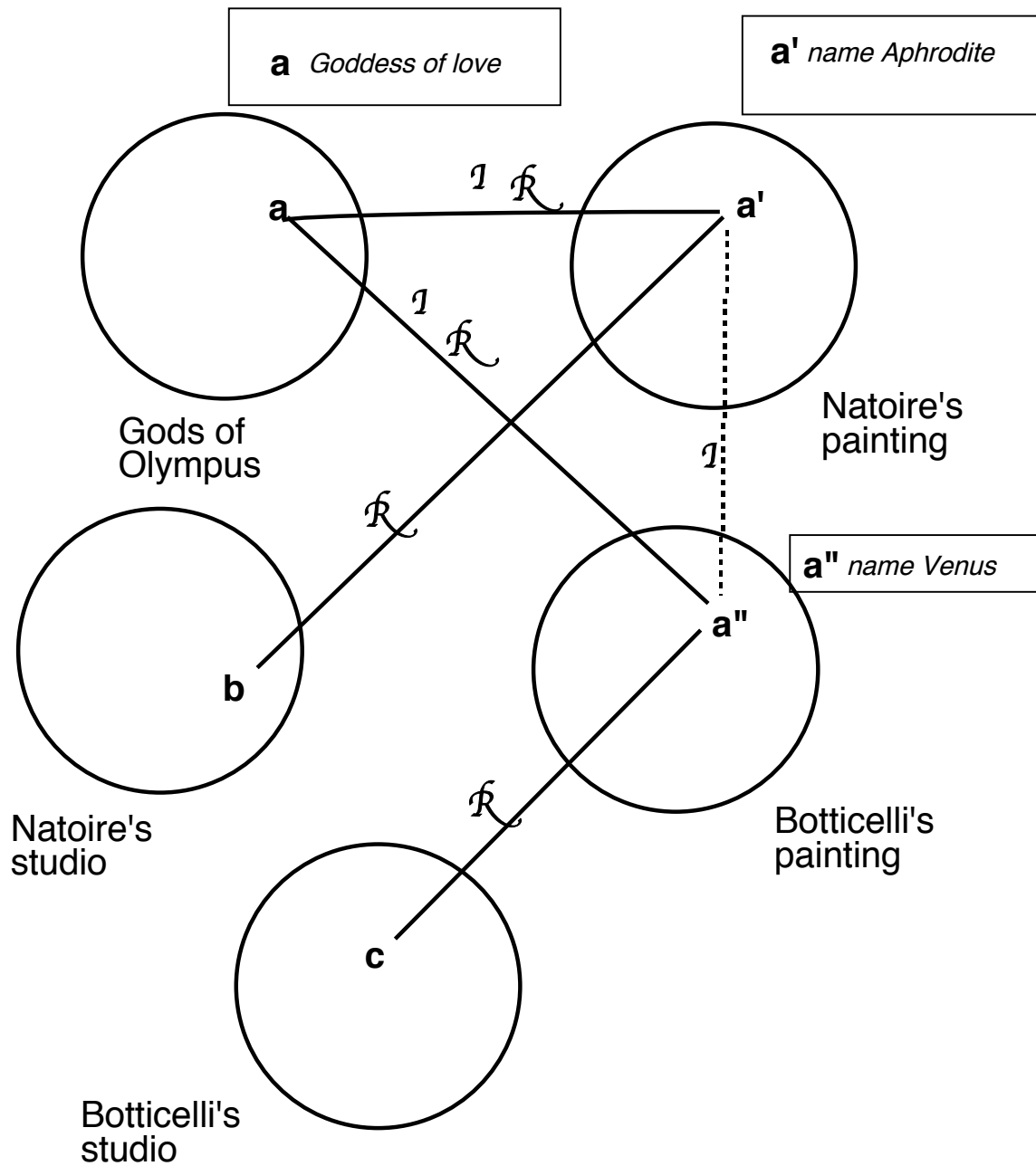
Botticelli's
painting

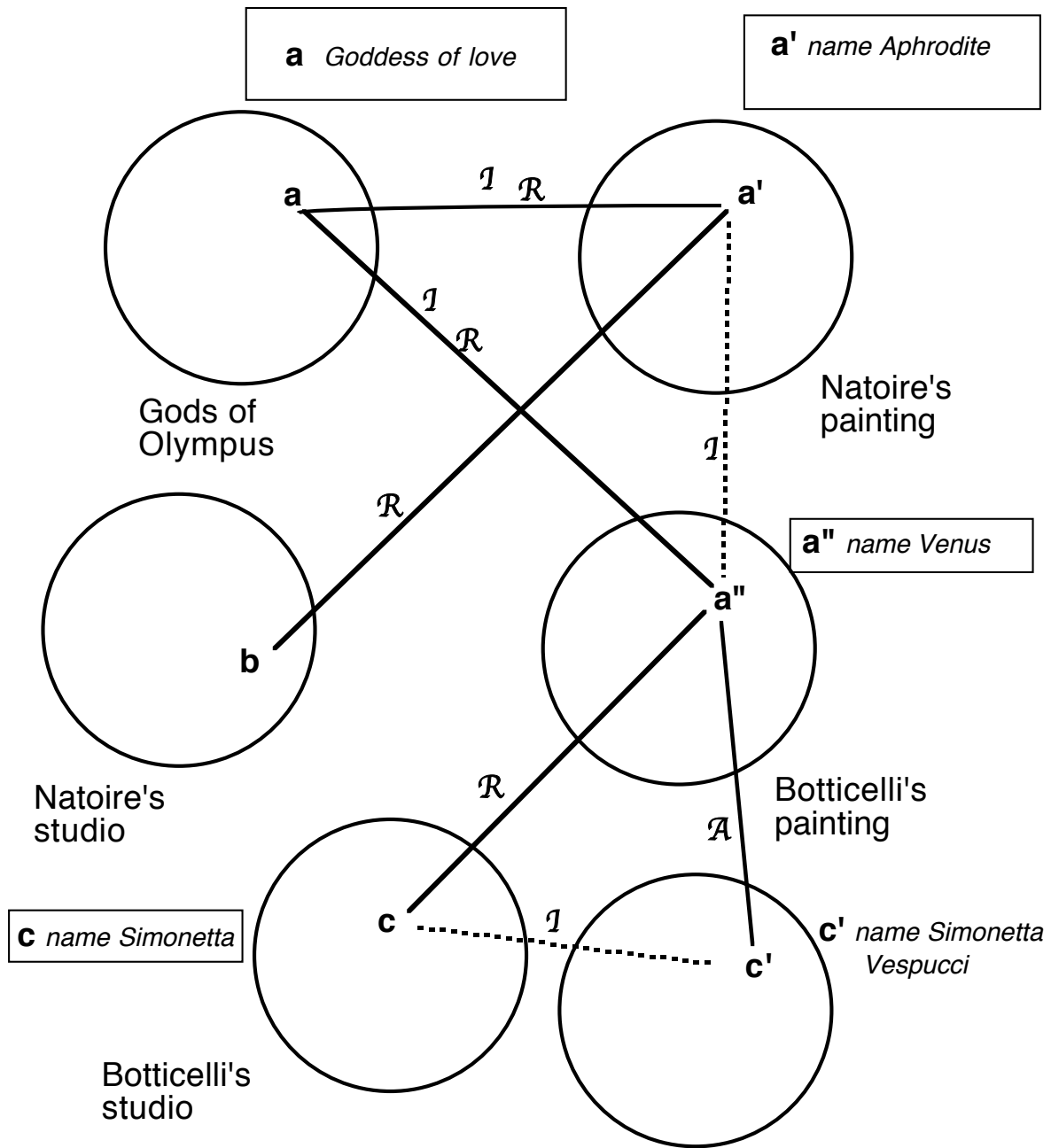


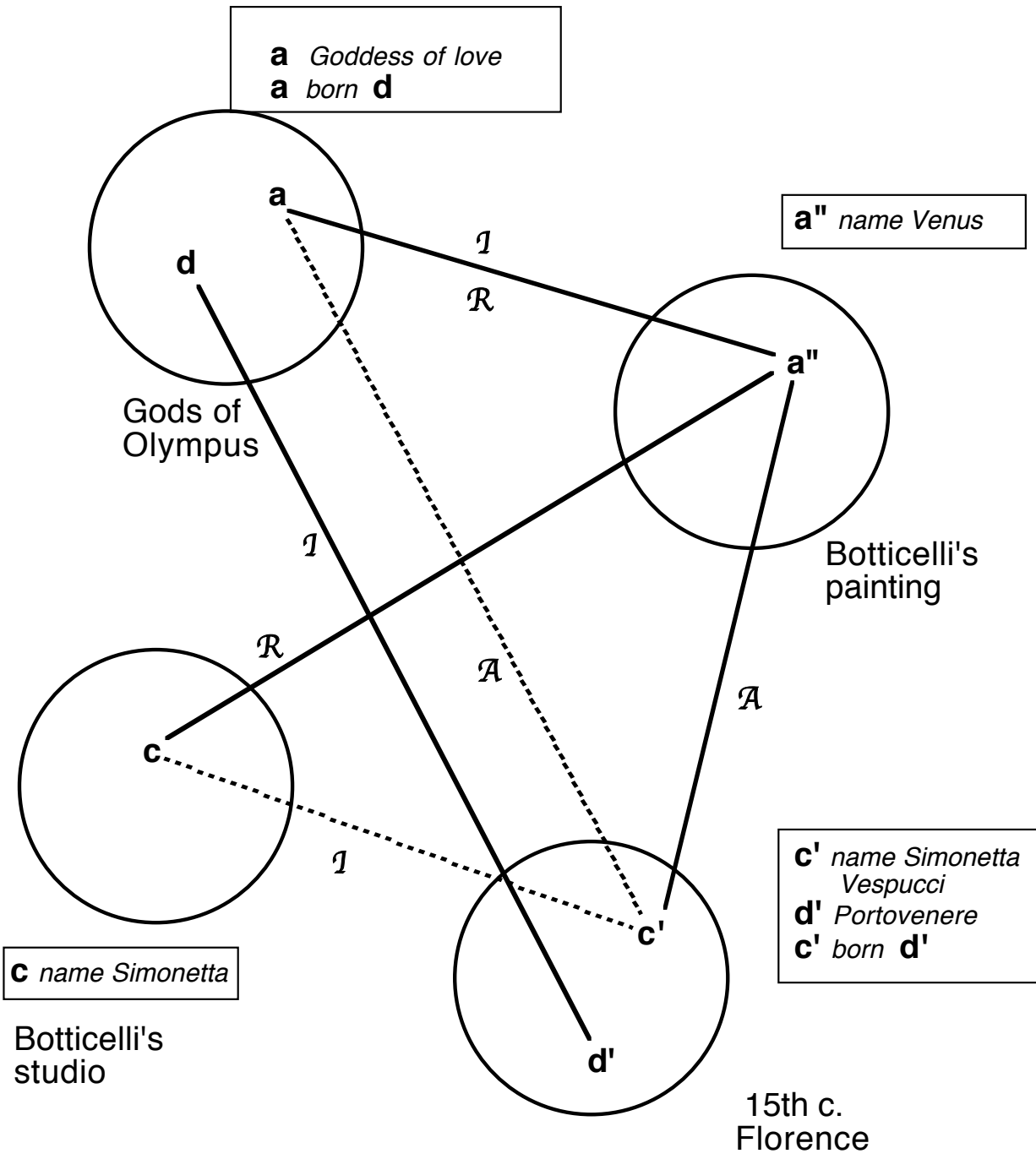






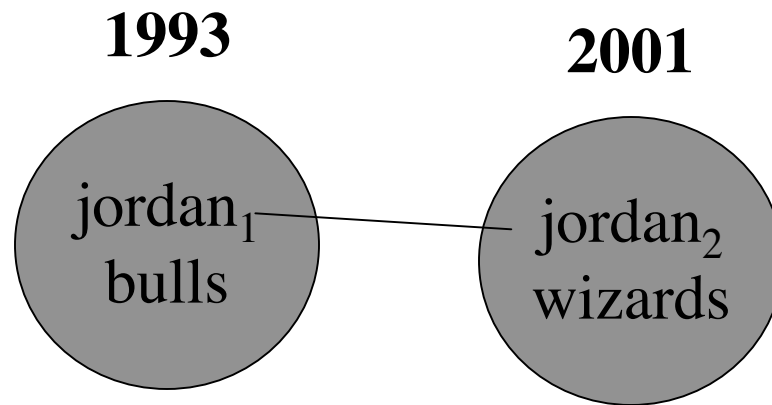






This large picture by Botticelli may have been, like the *Primavera*, painted for Lorenzo di Pierfrancesco de' Medici's Villa di Castello, around 1482, or even before. Some scholars suggest that the *Venus* painted for Lorenzo and mentioned by Giorgio Vasari may have been a different work, now lost. Some experts believe it to be a celebration of the love of Giuliano di Piero de' Medici (who died in the Pazzi conspiracy in 1478) for Simonetta Cattaneo Vespucci, who lived in Portovenere, a town by the sea with a local tradition of being the birthplace of Venus. It must be noted that Botticelli himself also privately loved the beautiful Simonetta, who was de' Medici's mistress. Whatever inspired the artist, there are clear similarities to Ovid's *Metamorphoses* and *Fasti*, as well as to Poliziano's *Verses*. Simonetta is also believed to have been the model for Venus in this painting, as well as for several other women in other Botticelli works, such as *Primavera*.

Identity Mapping

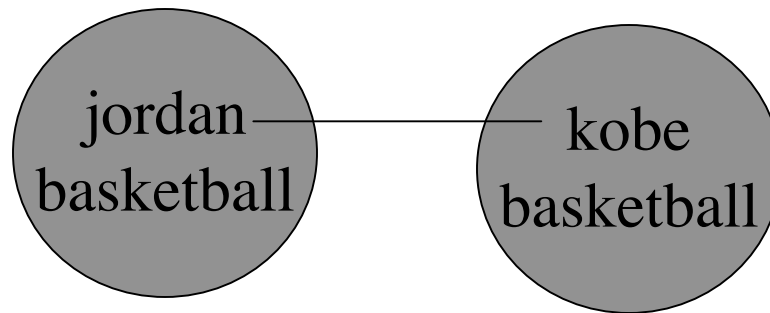


In 1993, Jordan played for the Bulls. Now he plays for the Wizards.

Analogy Mapping

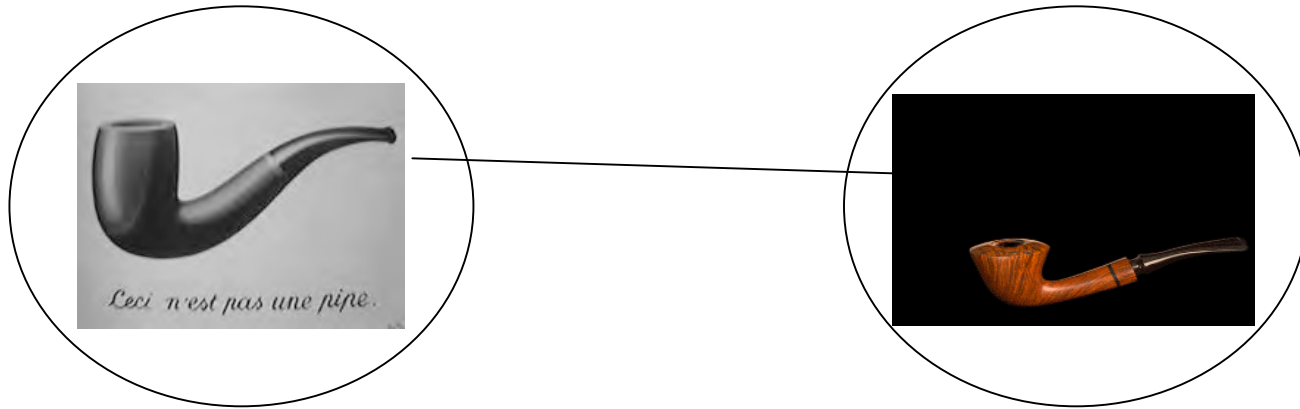
20th Century

21st Century



Kobe Bryant is the Jordan of the 21st century.

Representation Mapping



Representation

Actual

This is a pipe.

- (1) *In 2001, you climbed Mount Rainier.*
- (2) *If you had climbed Mount Rainier.*
- (3) *Max believes that you climbed Mount Rainier.*
- (4) *In the picture, you are climbing Mount Rainier.*
- (5) *When I was six years old, I weighed fifty pounds.*

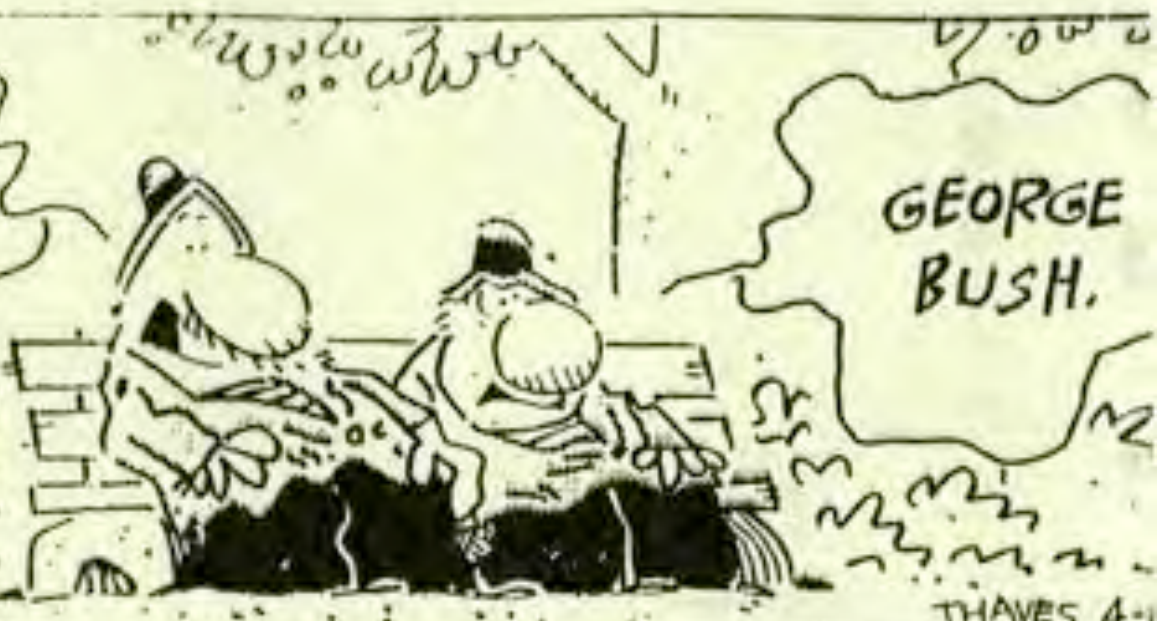
Access Principle

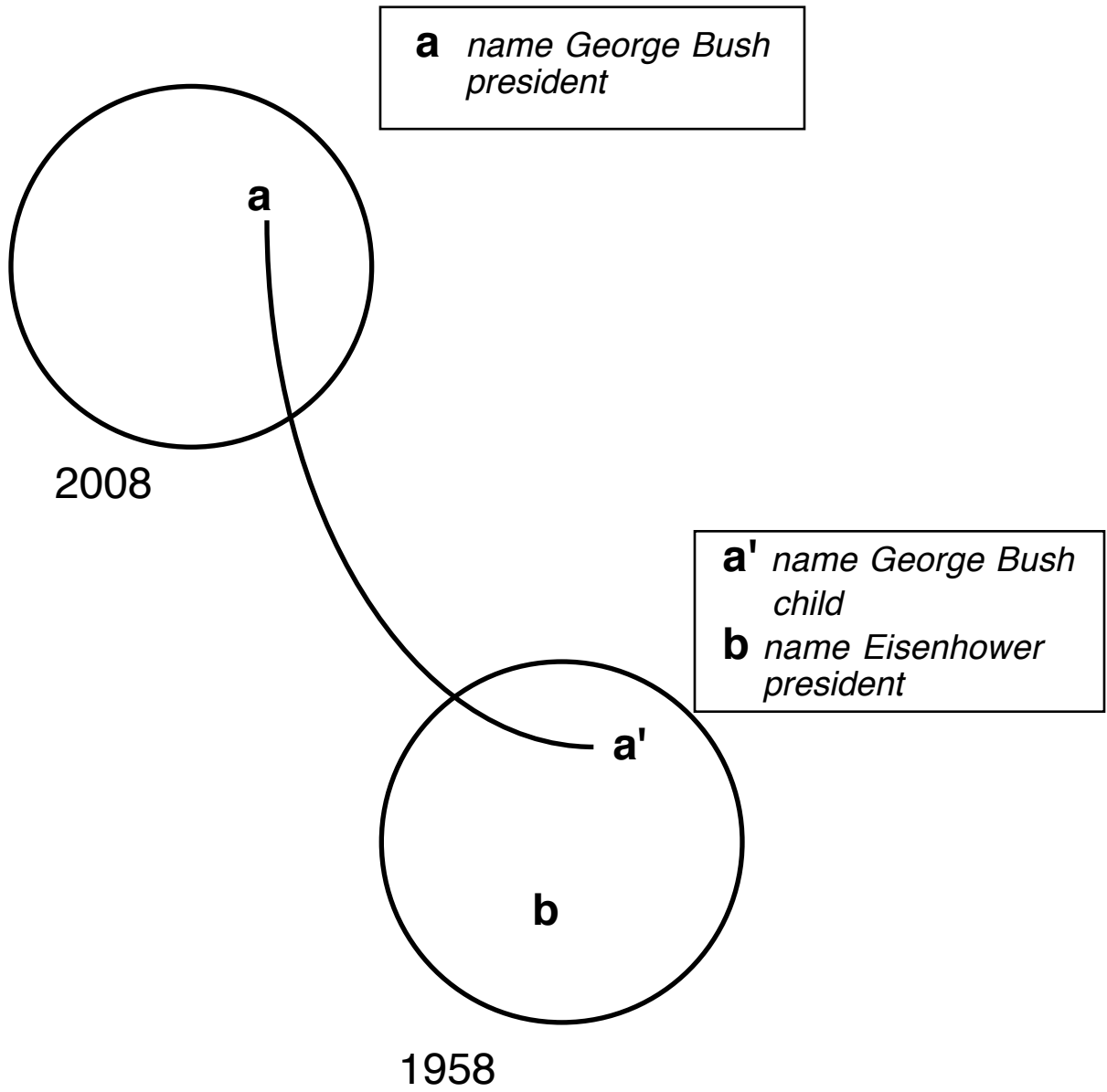
If two elements **a** and **b** are linked by a connector **F** ($b = F(a)$), then element **b** can be identified by naming, describing, or pointing to, its counterpart **a**.

I'M NOT UP ON
AMERICAN HISTORY.
WHAT WAS THE
PRESIDENT'S NAME
IN 1958?

GEORGE
BUSH.

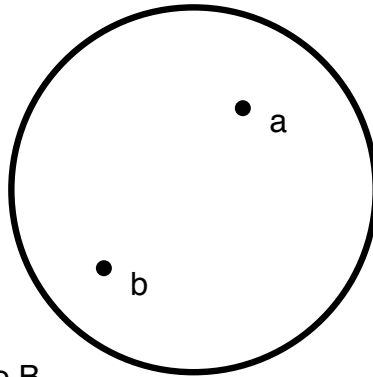
THAVES 4-1





Achilles sees a tortoise. He chases it. He thinks that the tortoise is slow and that he will catch it. But it is fast. If the tortoise had been slow, Achilles would have caught it. Maybe the tortoise is really a hare.

*Achilles sees a tortoise. He
chases it.*

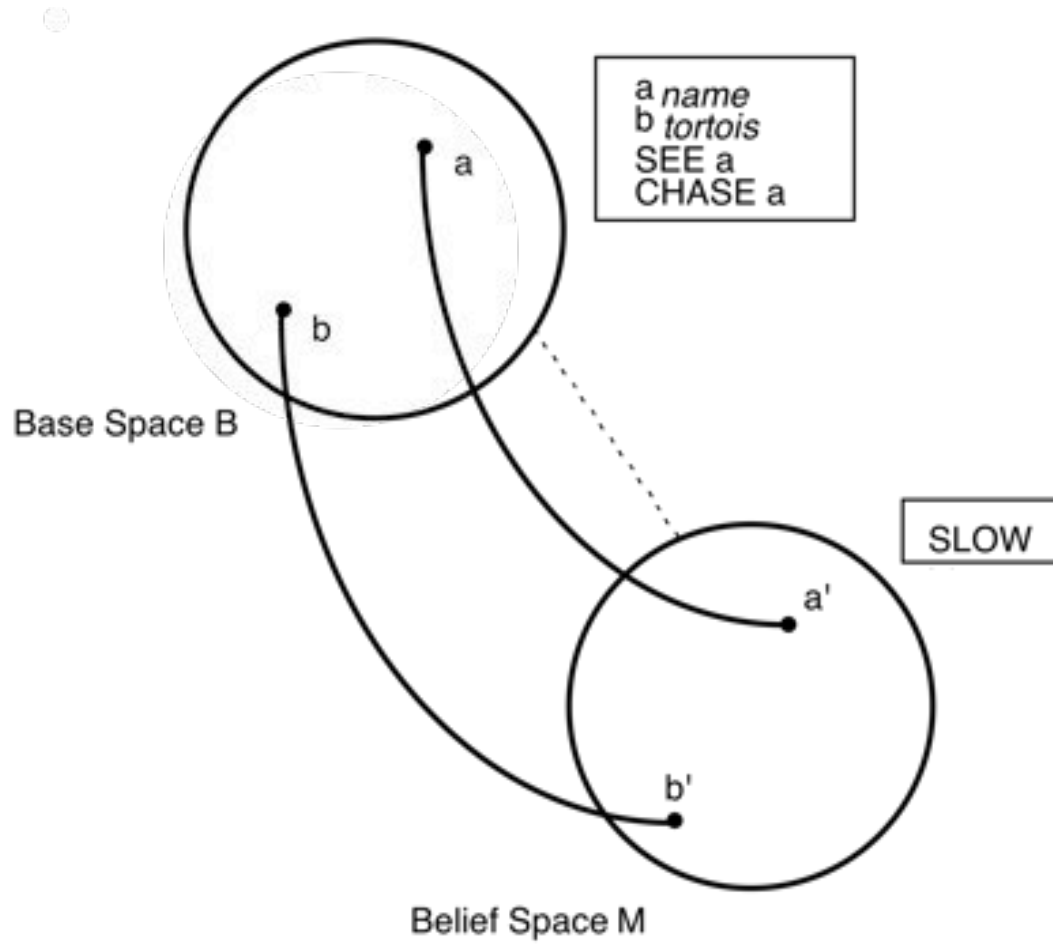


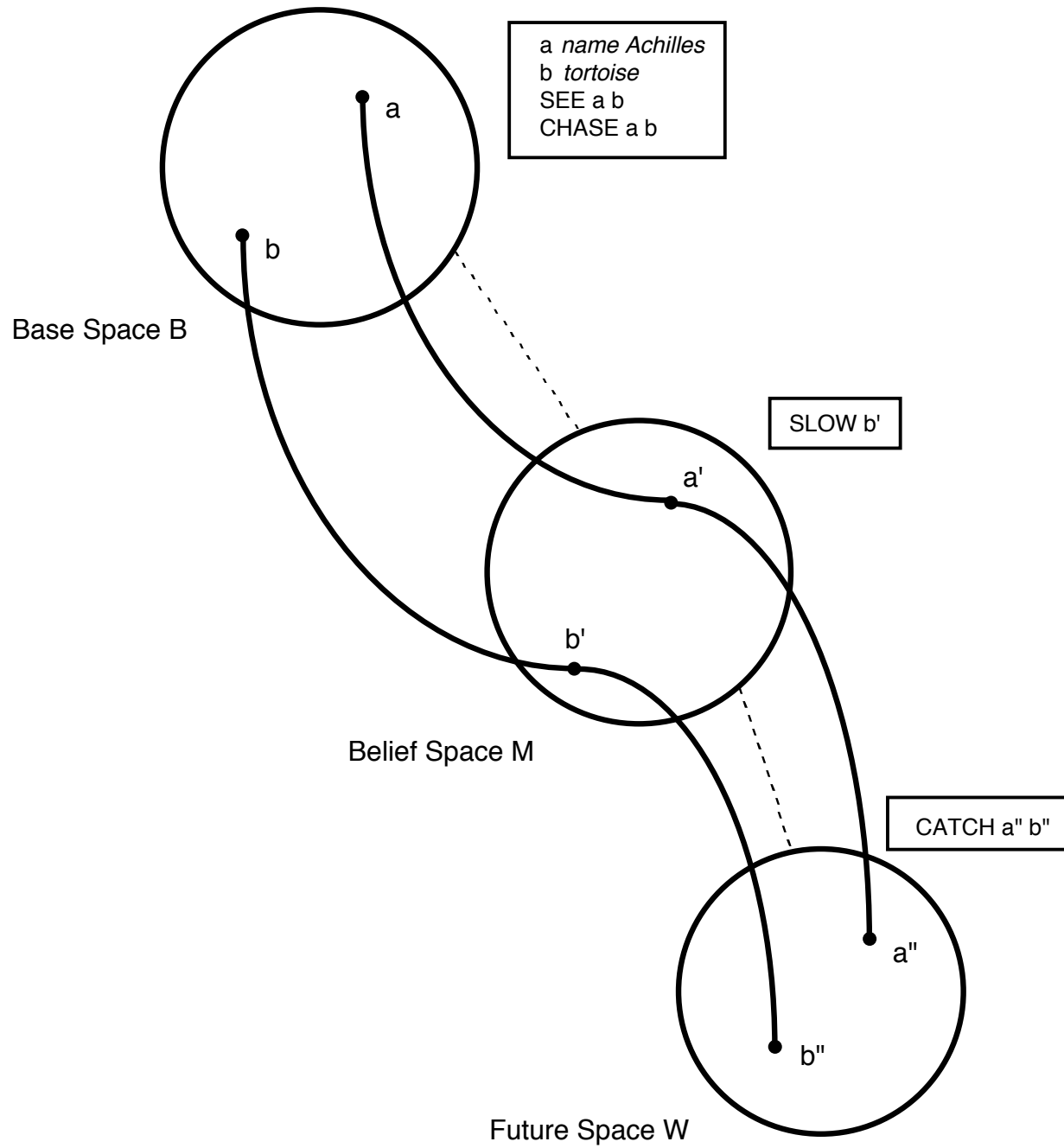
a name Achilles
b tortoise
SEE a b
CHASE a b

Base Space B

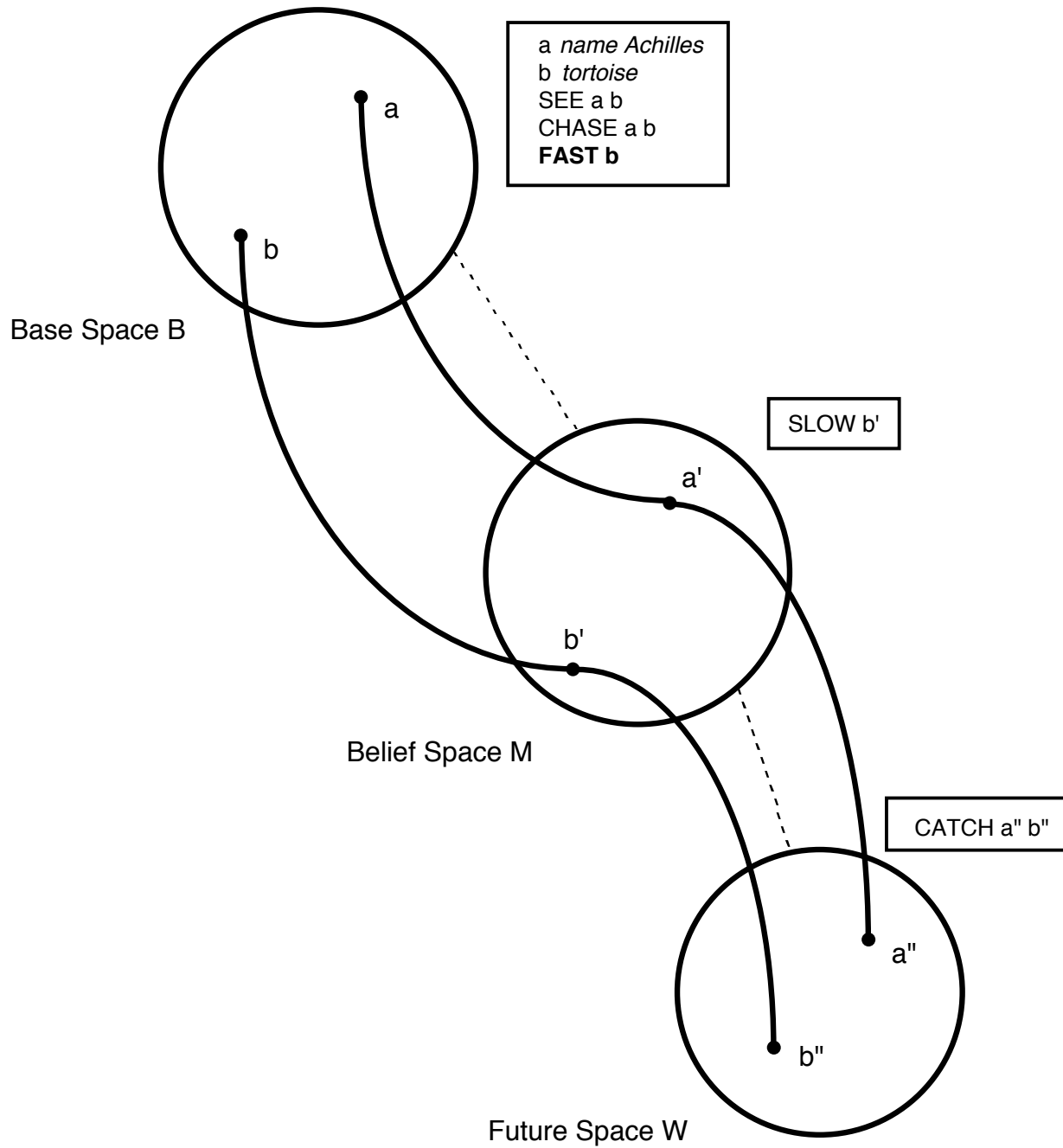
*He thinks that the tortoise is slow
and that he will catch it.*

space-builders

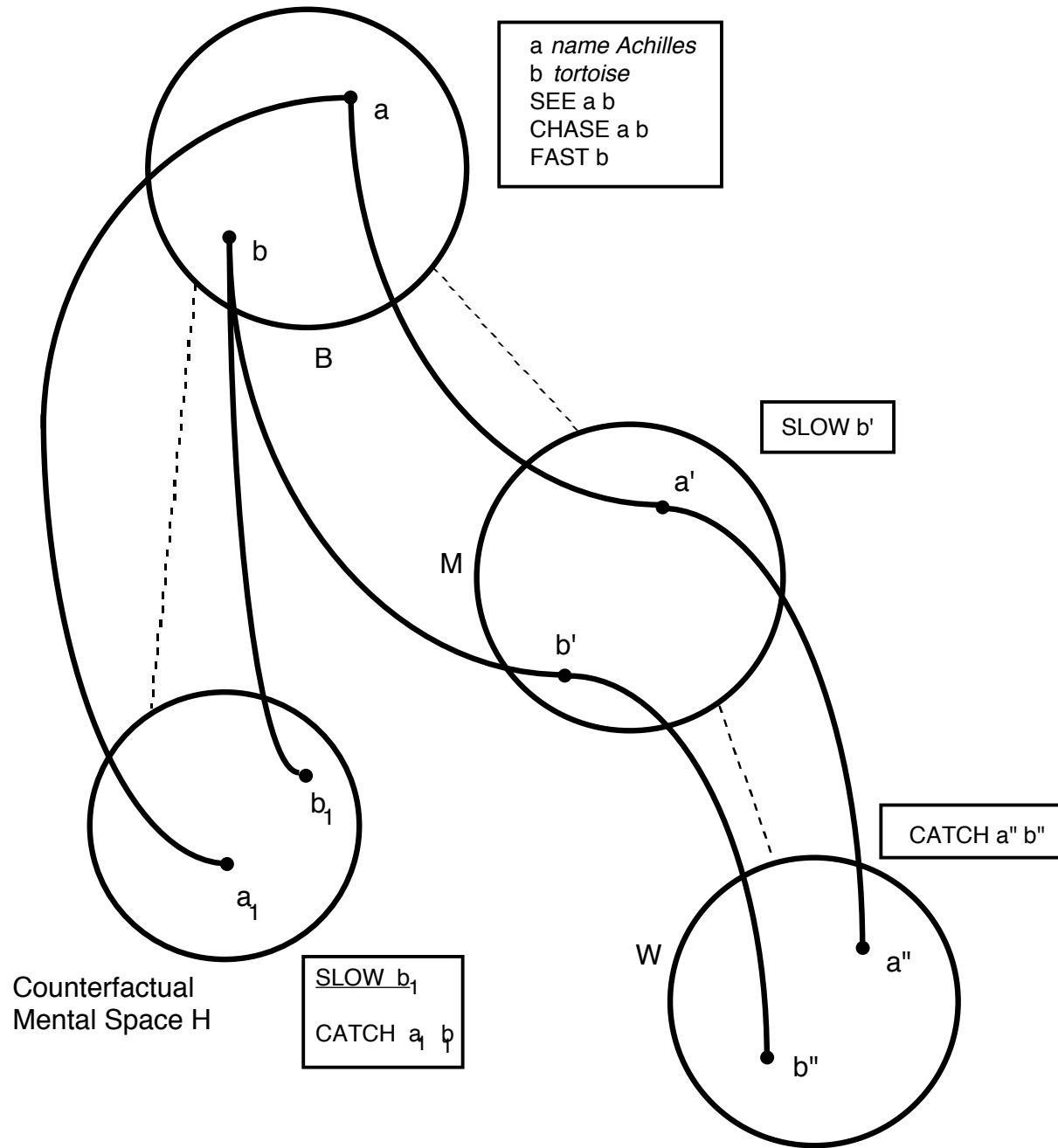




But it is fast.

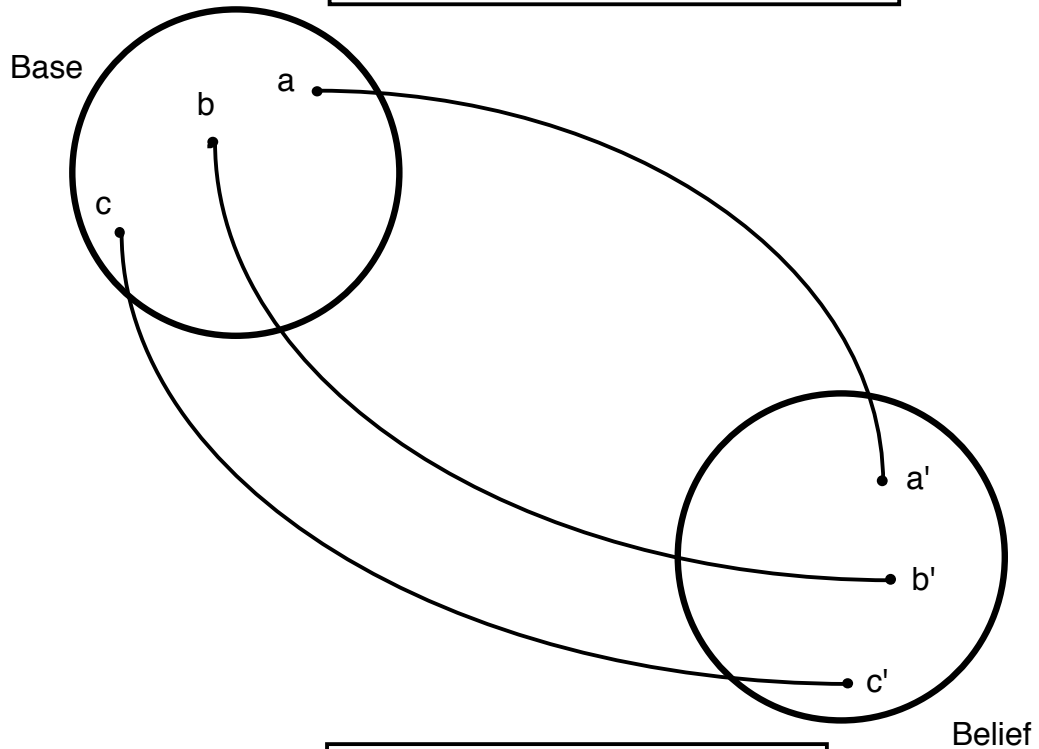


*If the tortoise had been slow,
Achilles **would** have caught it.*



Suppose James Bond, the top British spy, has just been introduced to Ursula as Earl Grey, the wealthy tea importer, and that she finds him handsome. It is equally true that *Ursula thinks the top British spy is handsome* and that *Ursula thinks the wealthy tea importer is handsome*, and both express the same belief.

a name Ursula
b name Bond, top spy
c name Lipton, wealthiest tea importer, ugly



a' name Ursula
b' name Grey, wealthiest tea importer
c' name Lipton, ugly

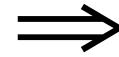
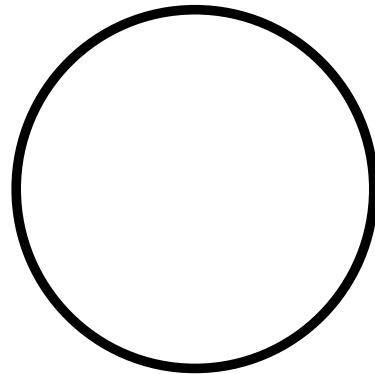
- (i) *Ursula thinks the wealthiest tea importer is handsome.*
- (ii) *Ursula thinks Lord Lipton is handsome.*

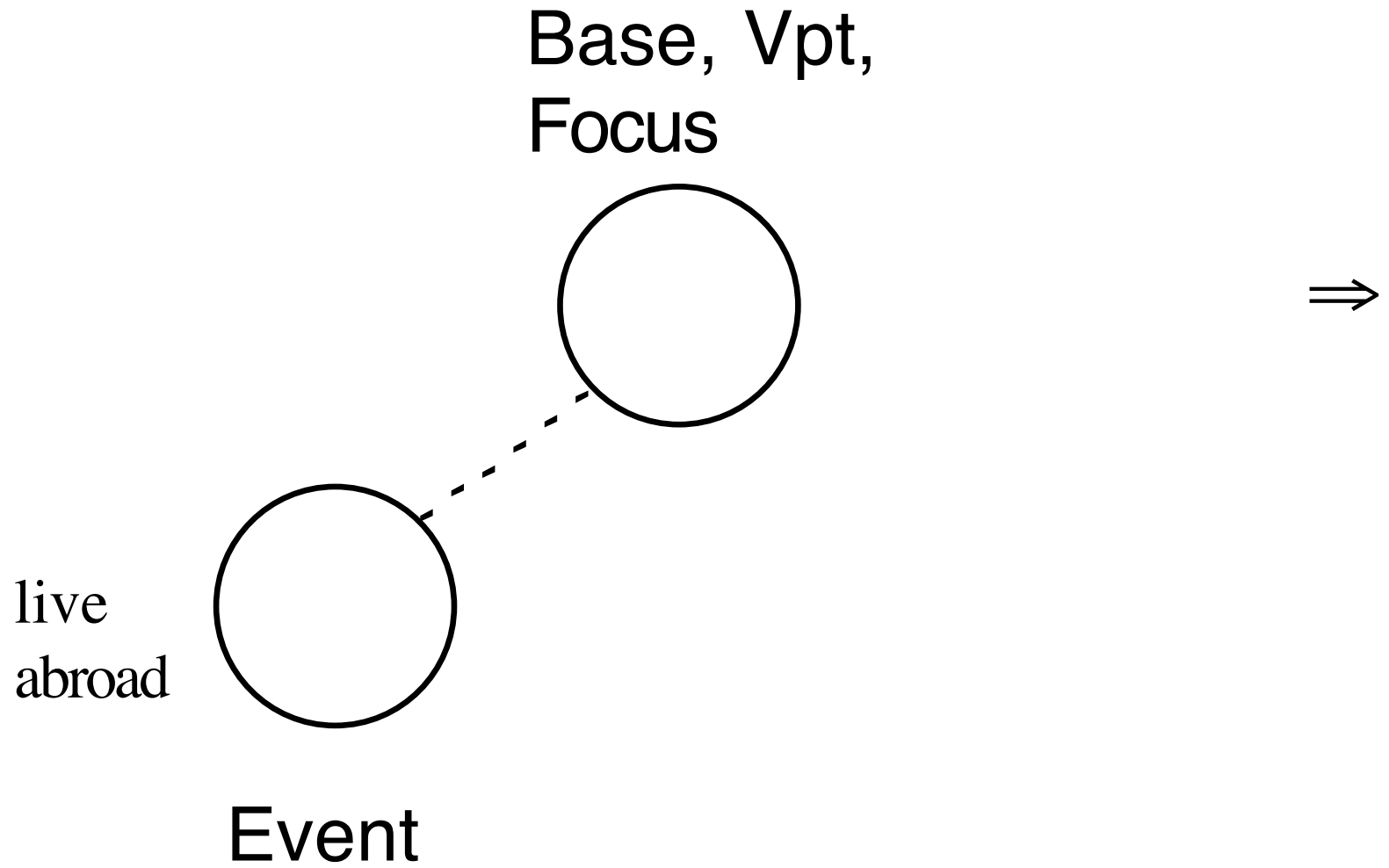
(11) *Max is 23. He has lived abroad. In 1990, he lived in Rome. In 1991 he would move to Venice. He would then have lived a year in Rome.*

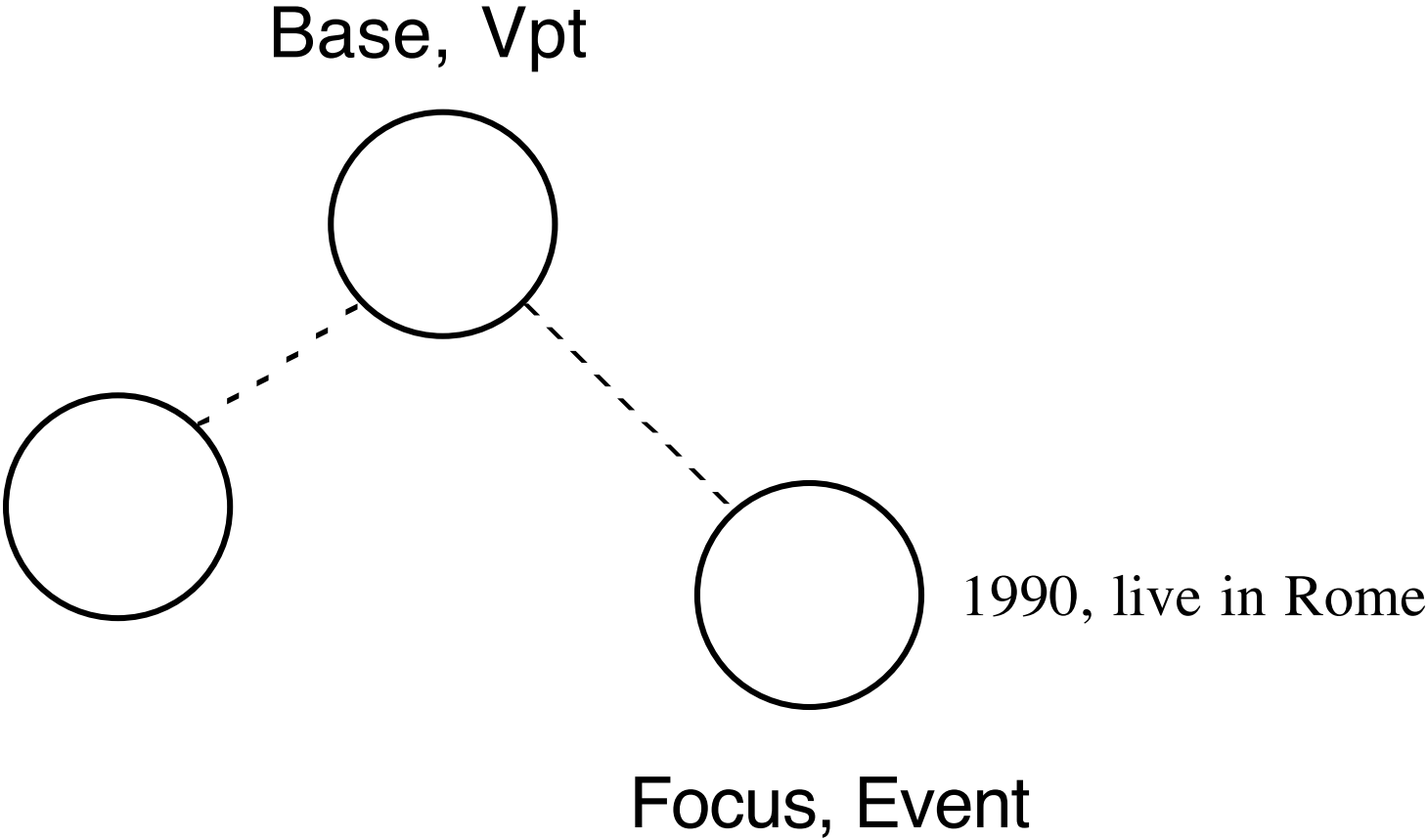
(11) *Max is 23. He has lived abroad. In 1990, he lived in Rome. In 1991 he would move to Venice. He would then have lived a year in Rome.*

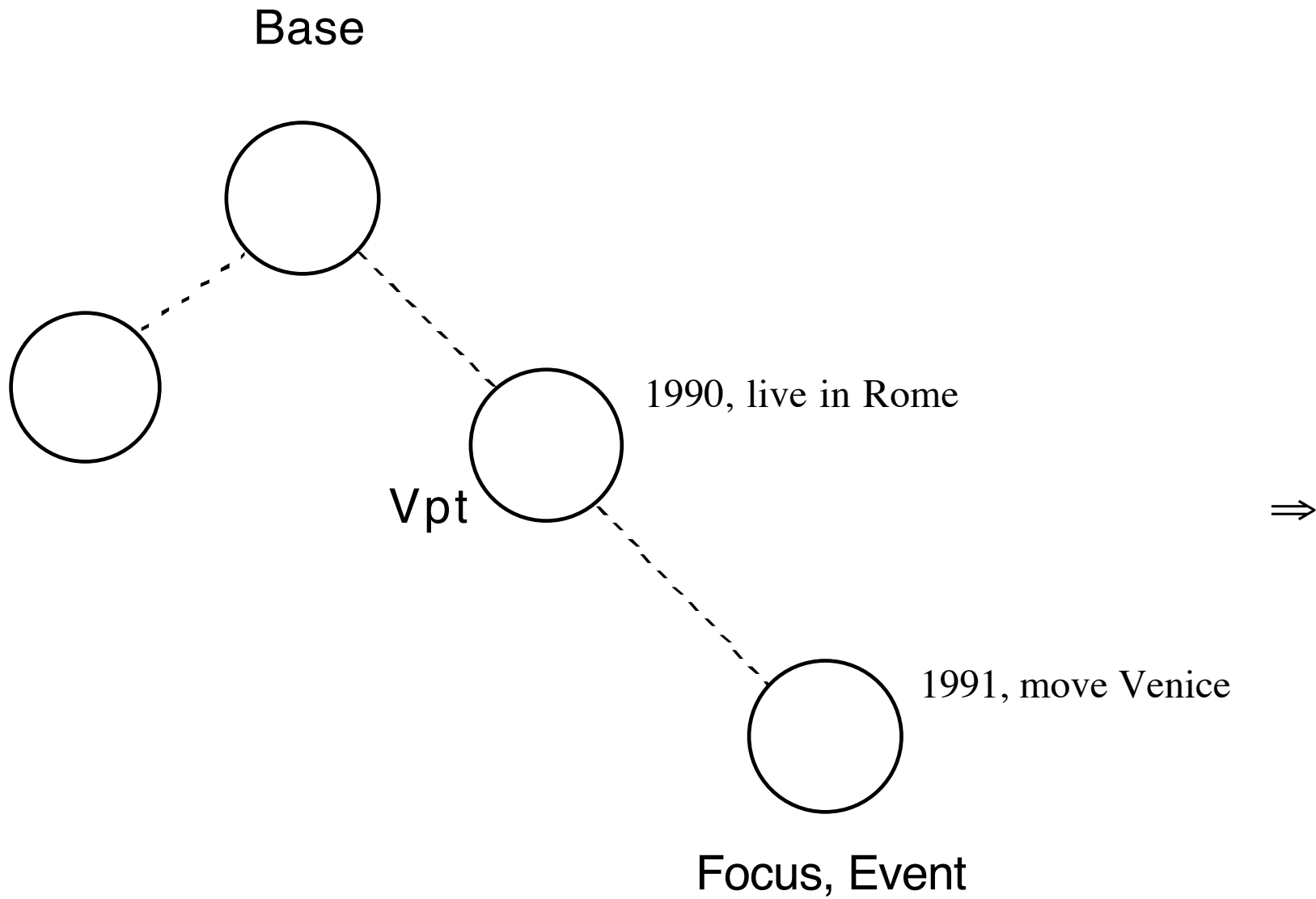
Base, Vpt,
Focus, Event

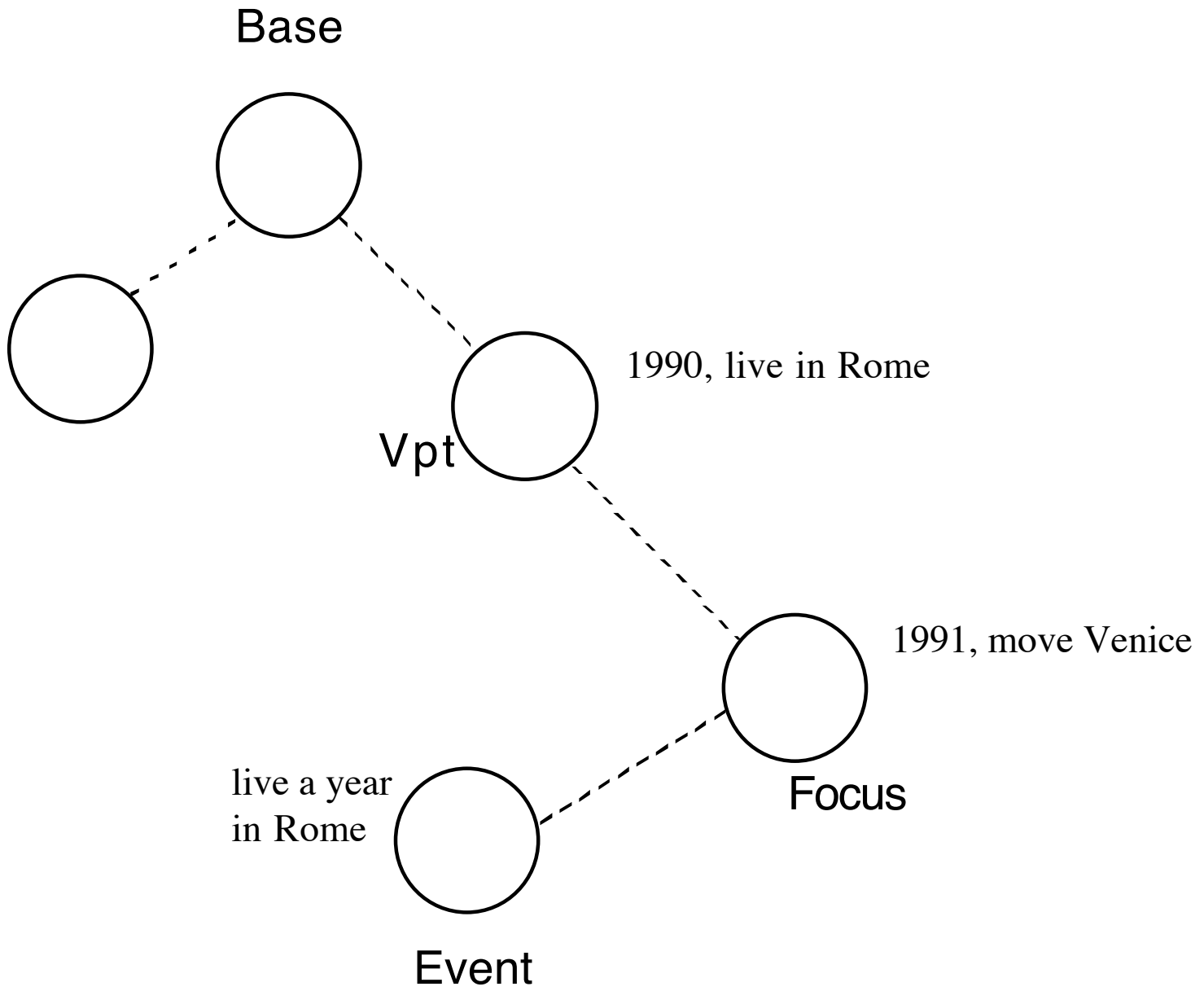
Max 23











Base space M---**PAST**---> Viewpoint Space N --- **FUTURE**----> Focus Space K

simple past + [*will* + Verb *move*]

⇒ (past + *will*) + *move*

⇒ *would move*

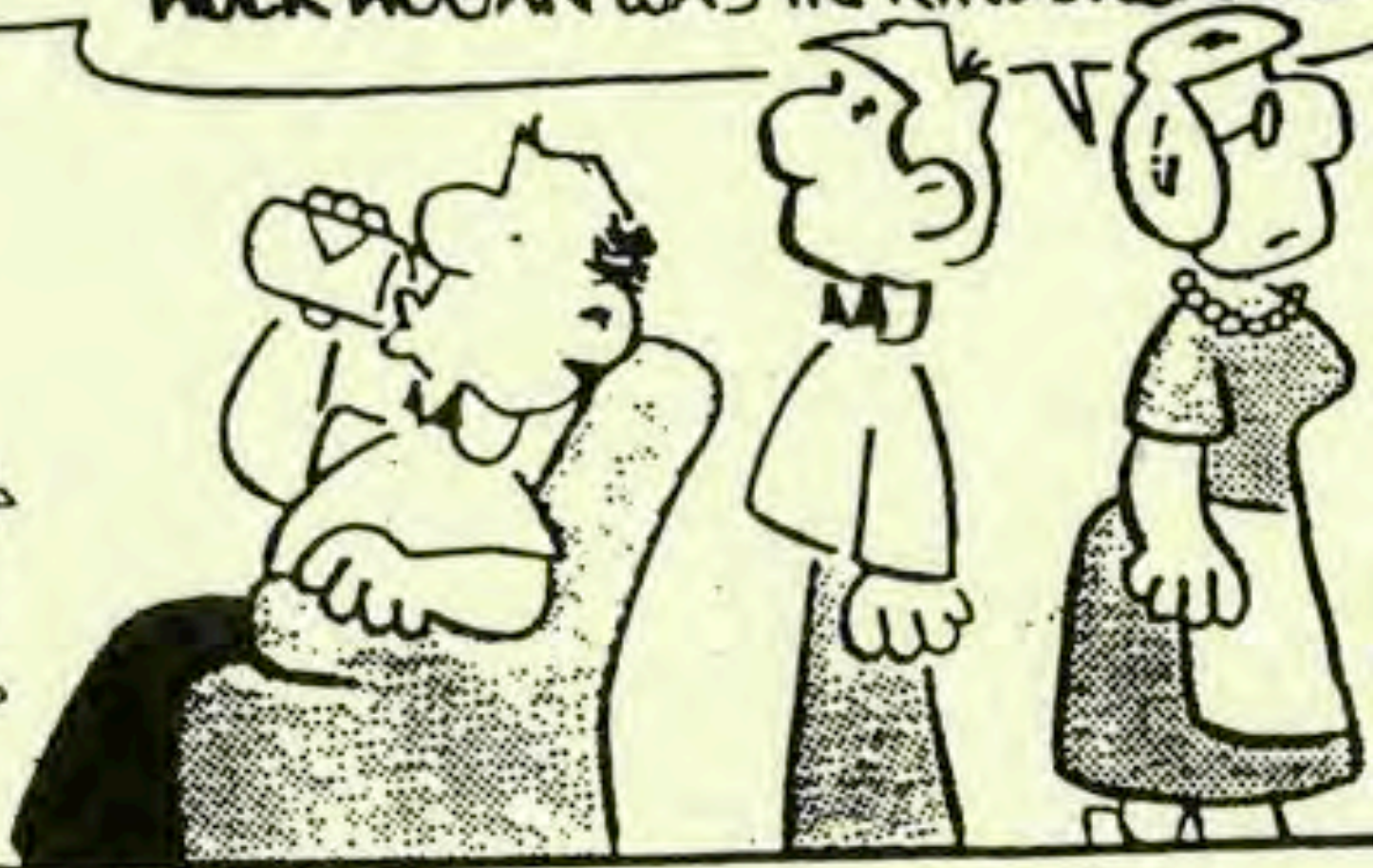
DRABBLE By Kevin Fagan



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OF COURSE, WHEN YOUR DAD WAS IN HIS PRIME,
HULK HOGAN WAS IN KINDERGARTEN

BEAN



4-28

Dad (watching wrestling on TV):

When I was in my prime, I could've pinned Hulk Hogan in a matter of seconds!

Son (to mother):

Is that true, Mom?

Mom:

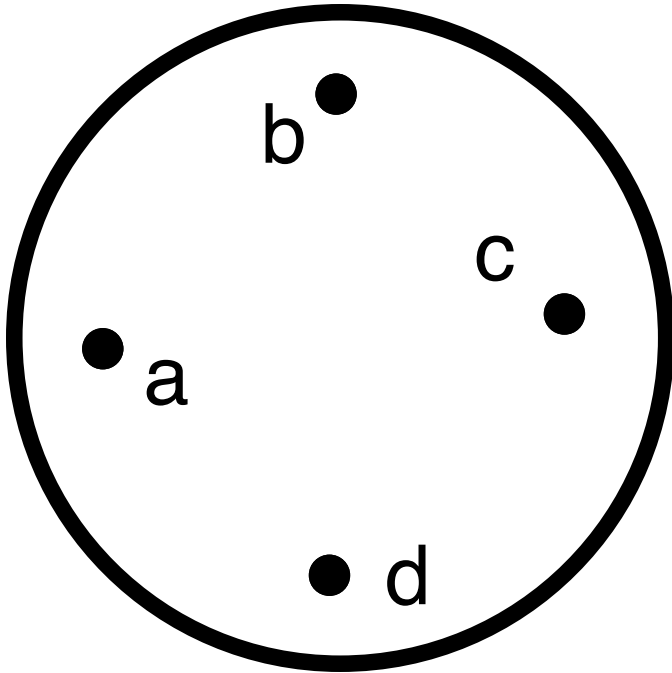
Probably.

Mom (next and last frame in the strip):

Of course, when your Dad was in his prime, Hulk Hogan was in kindergarten.

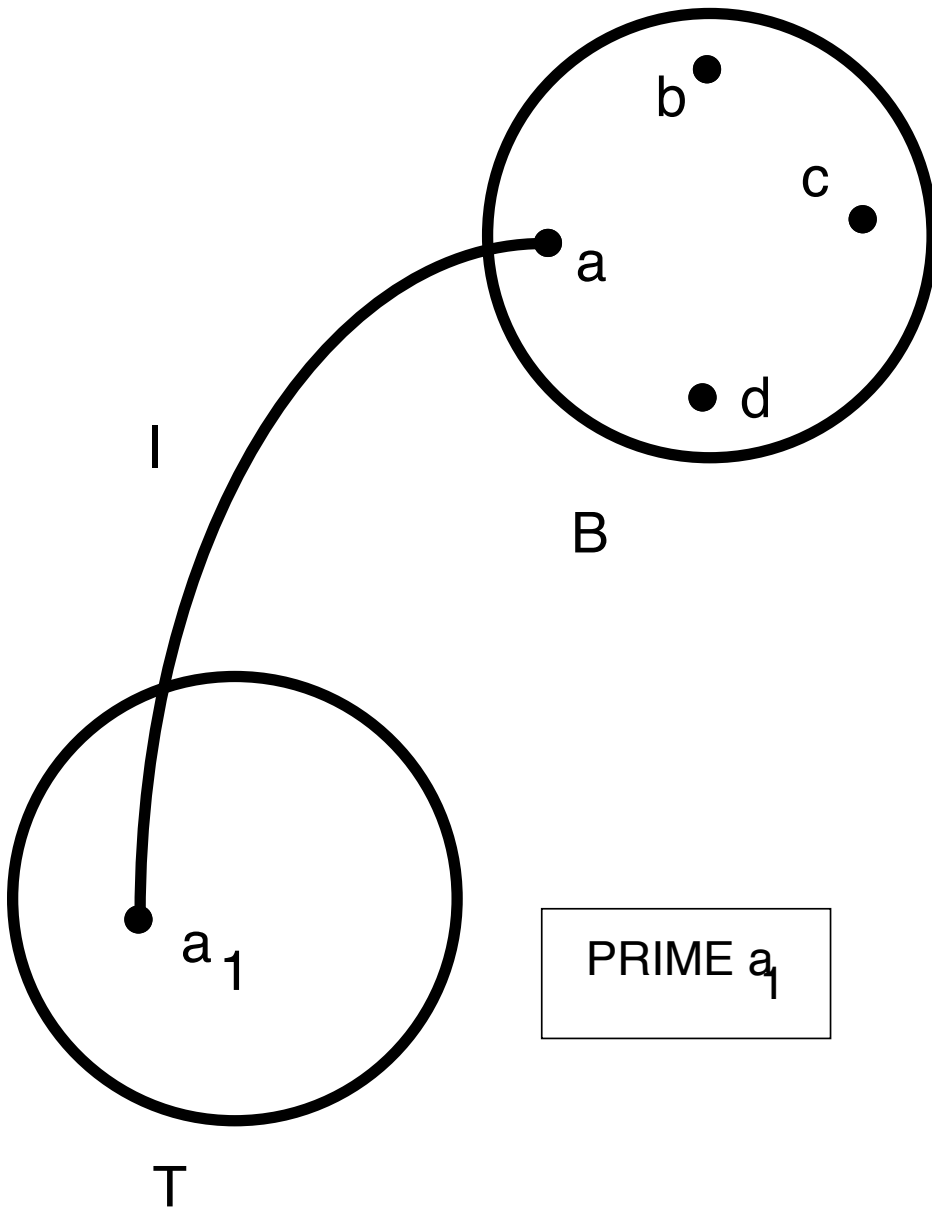
DRABBLE By Kevin Fagan





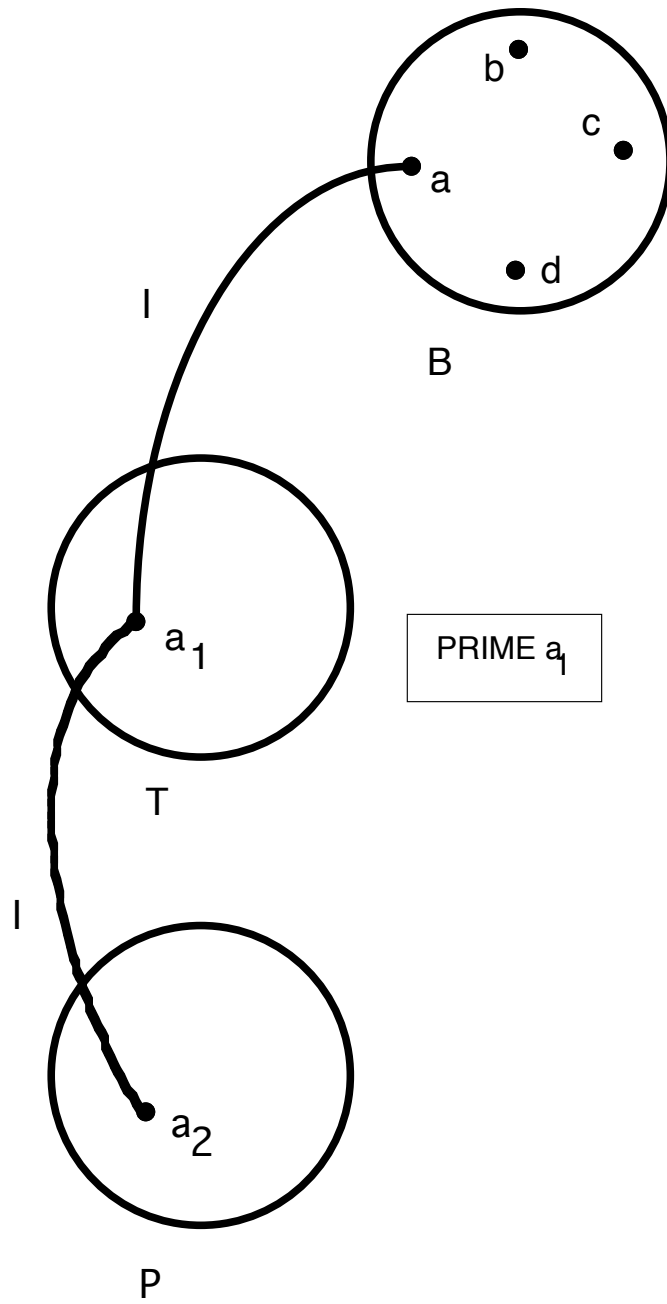
B

a: *name Dad*
b: *name Mom*
c: *name Norman*
d: *name Hulk*
CHAMPd



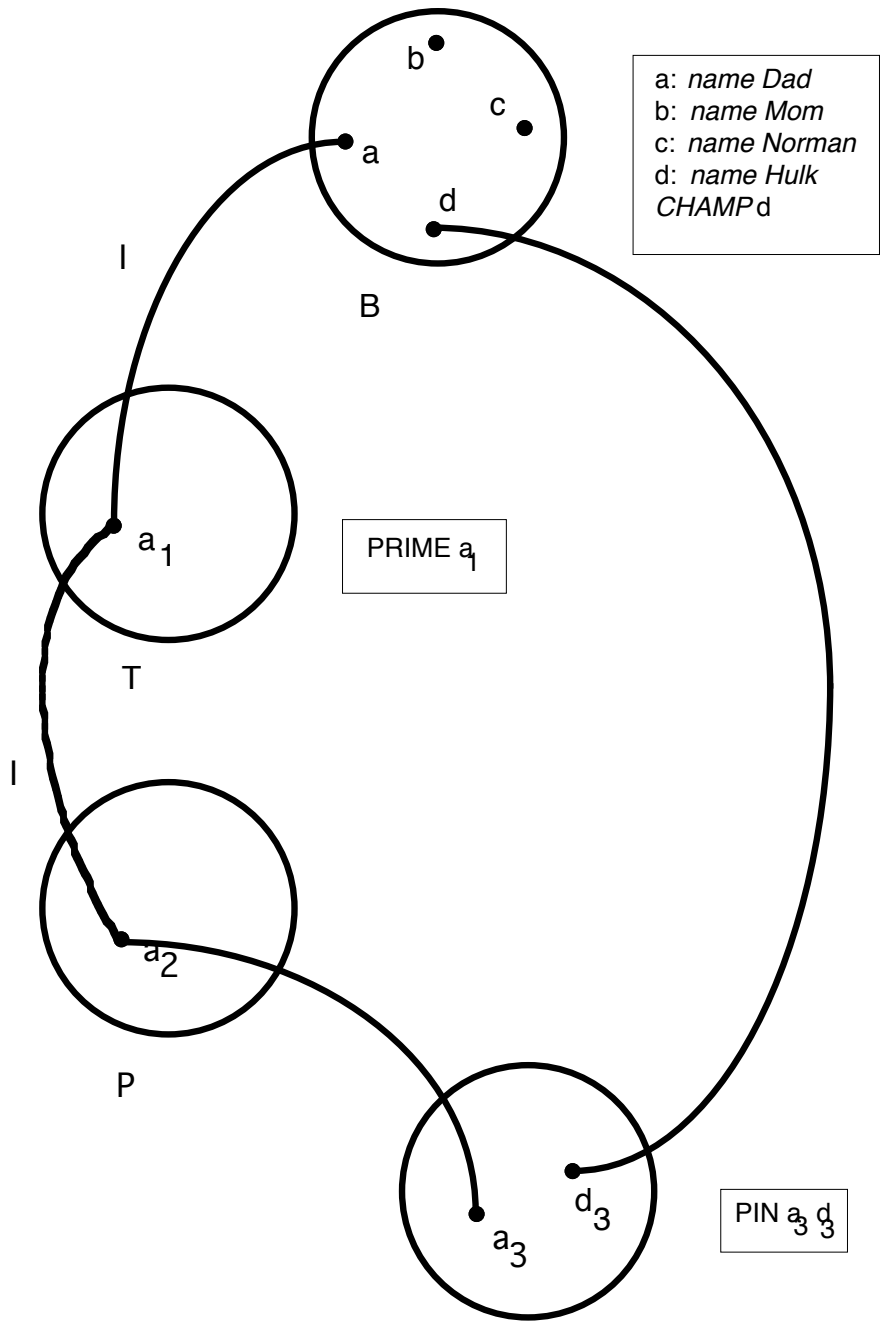
a: name Dad
b: name Mom
c: name Norman
d: name Hulk
CHAMP d

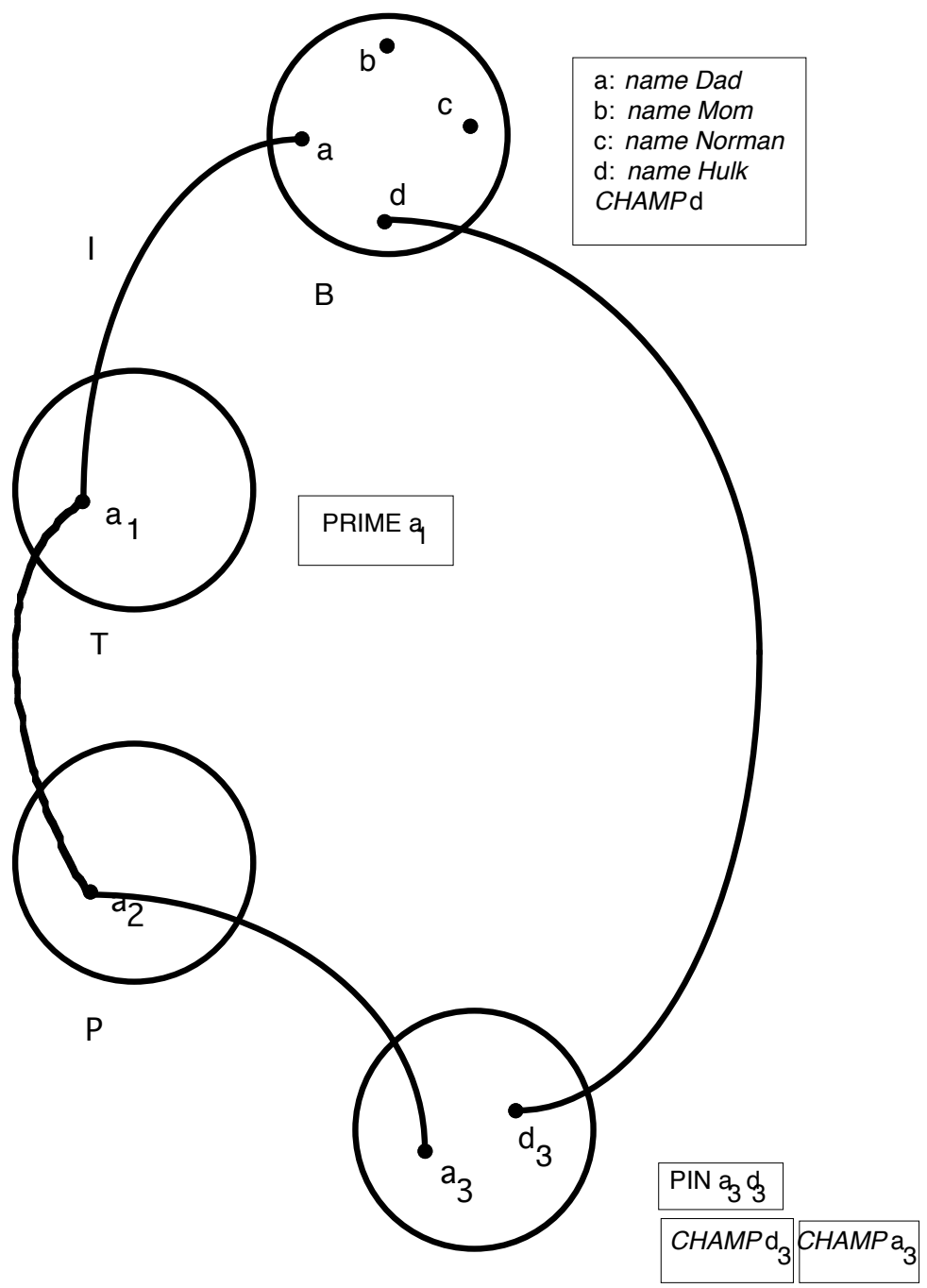
PRIME a_1

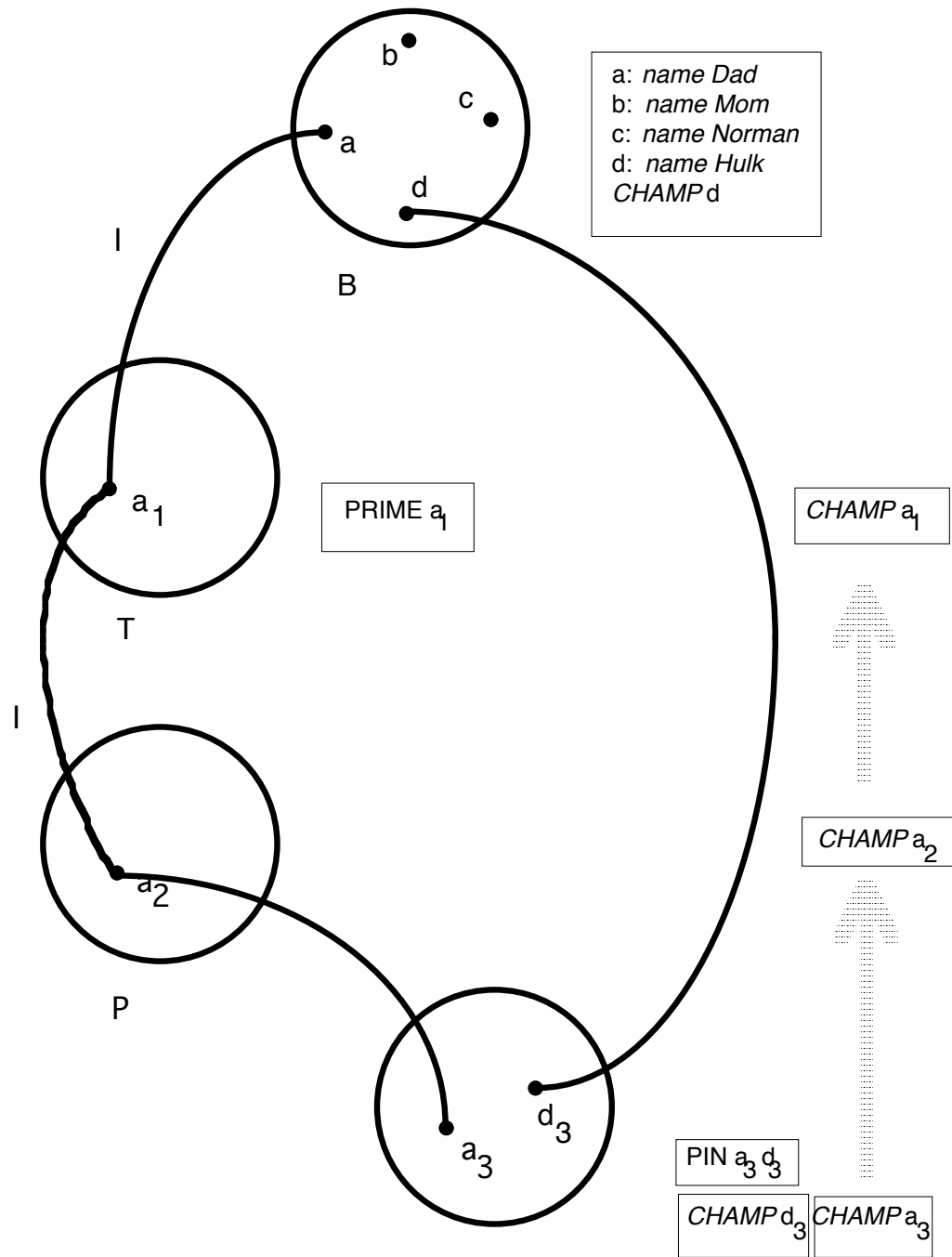


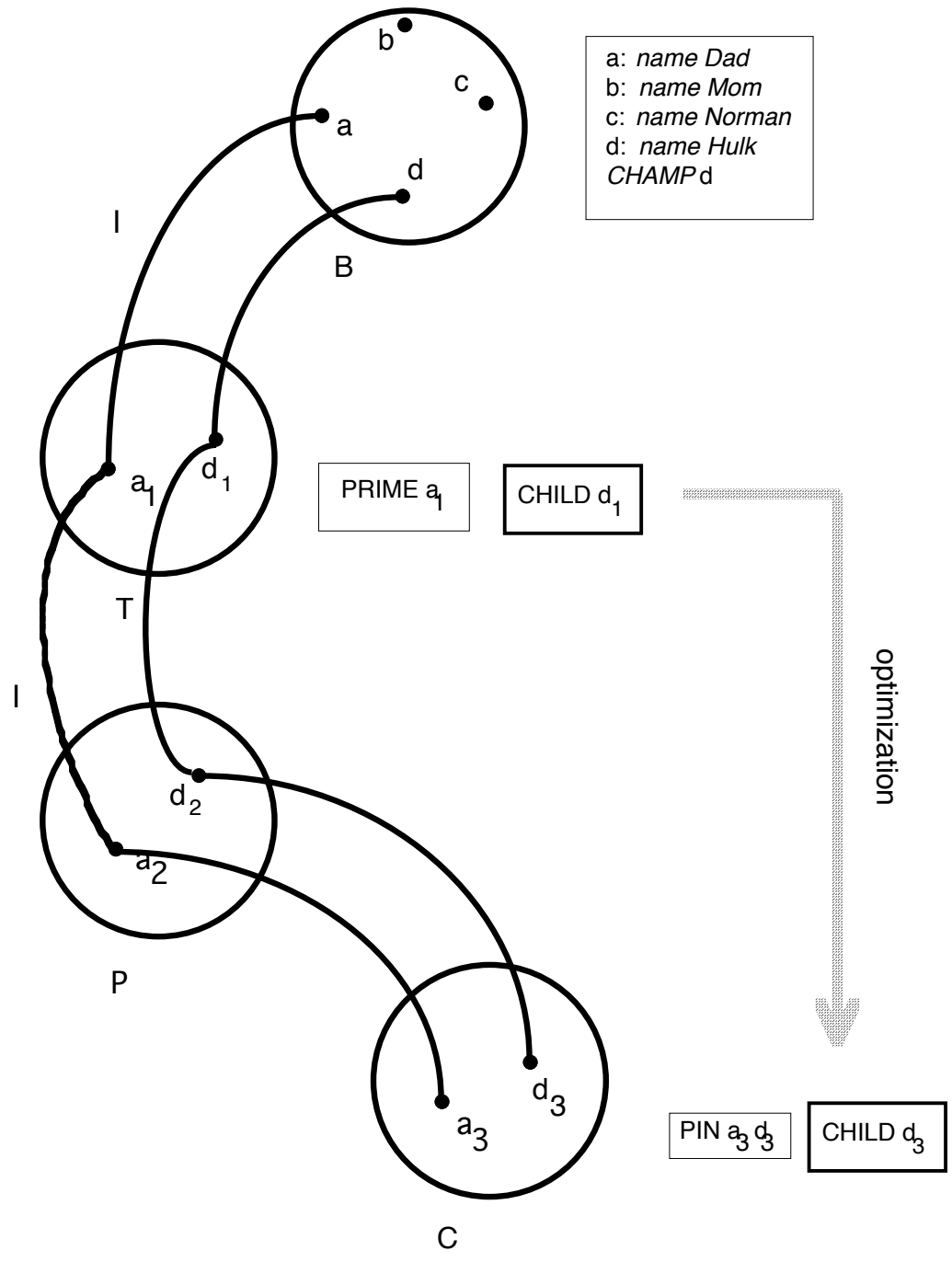
a: name Dad
b: name Mom
c: name Norman
d: name Hulk
CHAMPd

PRIME a₁









Calvin: *I got another letter from my past self.*

Hobbes: *What's it say?*

Calvin (reading): *"Dear Future Calvin, I wrote this several days before you will receive it. You've done things I haven't done. You've seen things I haven't seen. You know things I don't know. You Lucky Dog! Your pal, Calvin."*

Calvin: *I feel so sorry for myself two days ago.*

Hobbes: *Poor him. He wasn't you.*

In Pablo's picture, the girl with blue eyes has green eyes.

In Pablo's picture, the girl with green eyes is fat.

Pablo thinks that the girl with blue eyes has green eyes.

[transparent reading]

Pablo thinks that the girl with green eyes is fat.

[opaque reading]

Pablo thinks that the slim girl with blue eyes is fat and has green eyes.

Connectors:

That newspaper you're reading was just sold to Hearst for \$50Billion. It will reorganize itself, and will soon be located on Wall Street.

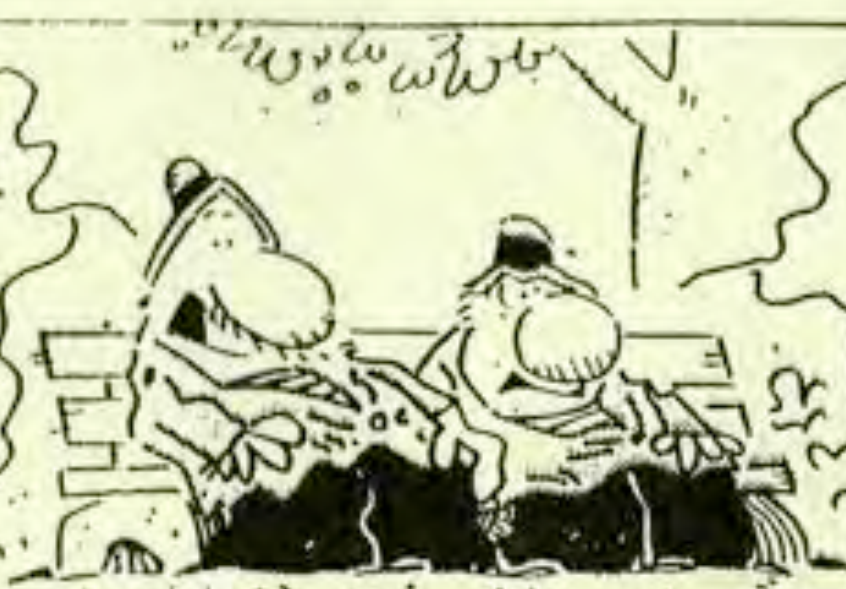
Norman Mailer loves to read himself.

Plato is on the top shelf, next to Homer.

I'm the quiche, she's the ham sandwich.

The mushroom omelet left without paying his bill.

I'M NOT UP ON
AMERICAN HISTORY.
WHAT WAS THE
PRESIDENT'S NAME
IN 1933?



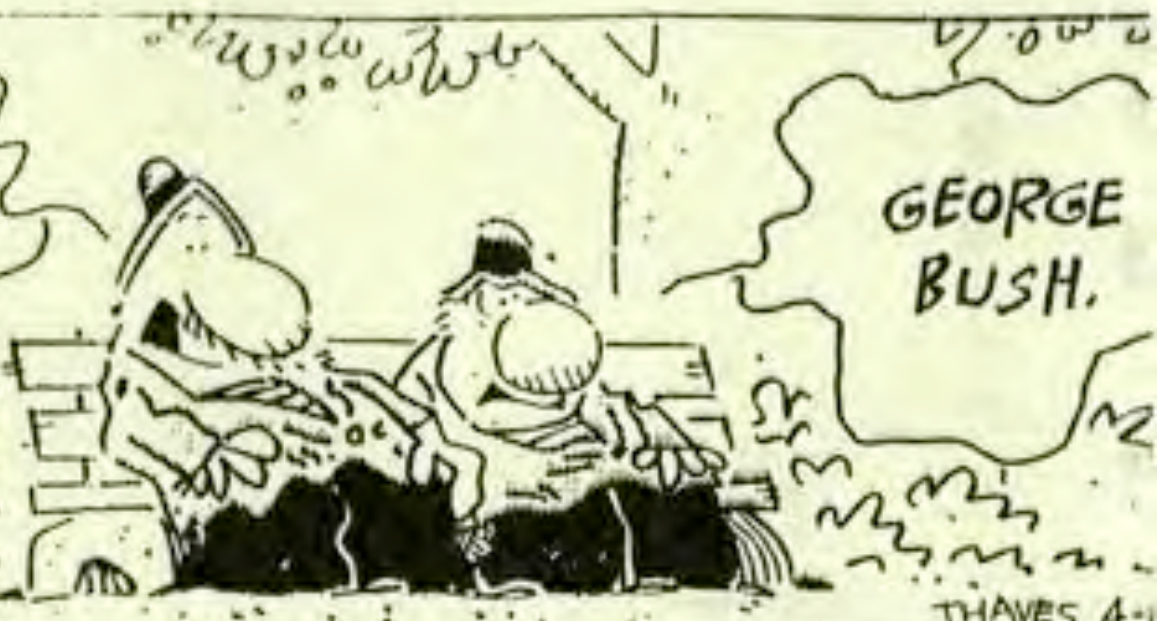
GEORGE
BUSH.

THAVES 4

I'M NOT UP ON
AMERICAN HISTORY.
WHAT WAS THE
PRESIDENT'S NAME
IN 1990?

GEORGE
BUSH.

THAVES 4-1



□

Numerous versions from several sources:

John and Bette had been married for 10 years when she asked what he would do if she died first:

Would you get married again?

"Well, I am only 36, so I might," he replied.

Would you live here in our home with her?

"I suppose so," he answered.

What about our bed, would you use that too?

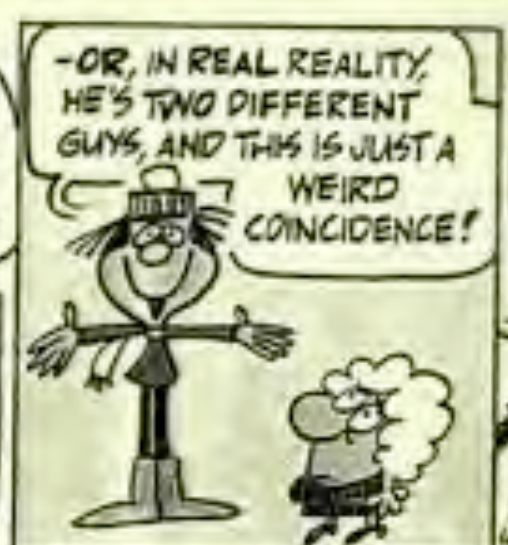
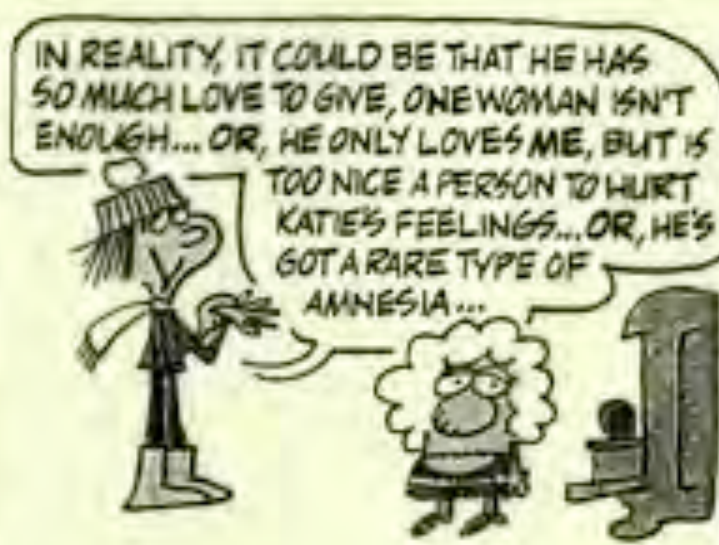
"Sure," he replied.

What about my new golf clubs, would you let her use those, too?

"Oh no," John said. "She's left-handed."

□





-OR, IN REAL REALITY,
HE'S TWO DIFFERENT
GUYS, AND THIS IS JUST A
WEIRD
COINCIDENCE!



YES, THAT'S
THE REALITY!!
IT'S A
COINCIDENCE!
THANKS,
MOMMA!



THE REALITY IS
THAT IF I DIDN'T
HAVE THAT ROAST
IN THE OVEN,
I'D STICK MY
HEAD IN IT...



