A Feminist Fuzzy Model of Gender Identity

Ivan Restović
Institute of Philosopy, Zagreb
irestovic@ifzg.hr

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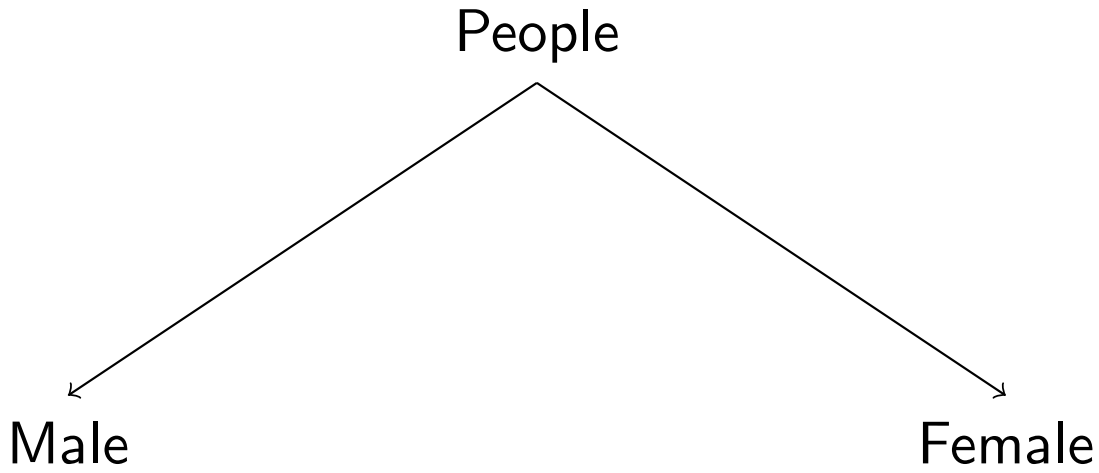
What this talk is about

- different models (diagrams) of gender identity
- what kind of logical opposition between gender categories they use
- if they are compatible with Val Plumwood's *feminist logic* program

- *fuzzy contrariety* and the *fuzzy logical hexagon*

Traditional Model of Gender



"Gender-wise, people are either male or female."
(Wrong.)

- in logical terms: the opposition of *contradiction*
- (behave like p and $\neg p$.)

Types of opposition (in classical logic) – *for propositions*

Contradiction

- cannot be simultaneously true
- cannot be simultaneously false

Contrariety

- cannot be simultaneously true
- can be simultaneously false

Subcontrariety

- can be simultaneously true
- cannot be simultaneously false

Types of opposition (in classical logic) – *for predicates*

Contradiction

- are mutually exclusive
- are jointly exhaustive

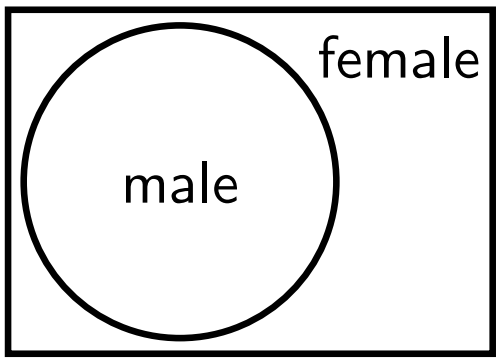
Contrariety

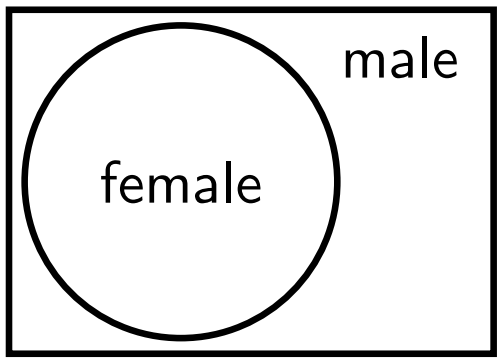
- are mutually exclusive
- aren't jointly exhaustive

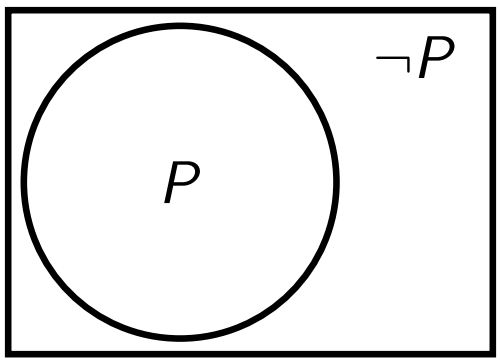
Subcontrariety

- aren't mutually exclusive
- are jointly exhaustive

Traditional model of gender







Plumwood's critique of P vs. $\neg P$ differentiation

Val Plumwood's (1993) *feminist logic* program:

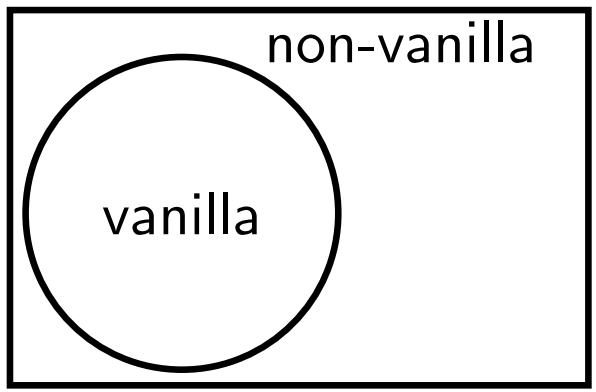
- P vs. $\neg P$ is too rigid and oppositional kind of difference (also: Nancy Jay 1981; Andrea Nye 1990)
- negation in classical logic has oppressive features:
  i. homogenization
  ii. relational definition
  iii. radical exclusion

- a feminist logic = a logic with non-oppressive account difference (negation)

Homogenization (stereotyping)

- all the differences between the members of $\neg P$ are disregarded

If, for instance, "vanilla" is assigned as the **A**, *then* **not-A** *includes not only strawberry, chocolate, and peppermint ripple but also triangles, the square root of two, the orbit of Haley's comet, and all the shoes in the world. All of these are not vanilla, and as not-vanilla, they are indistinguishable. [...] [T]he category of not-vanilla is an infinite undifferentiated plenum, unstructured, formless, a chaos undelineated by boundaries.*
(Marilyn Frye, 1996: 999)

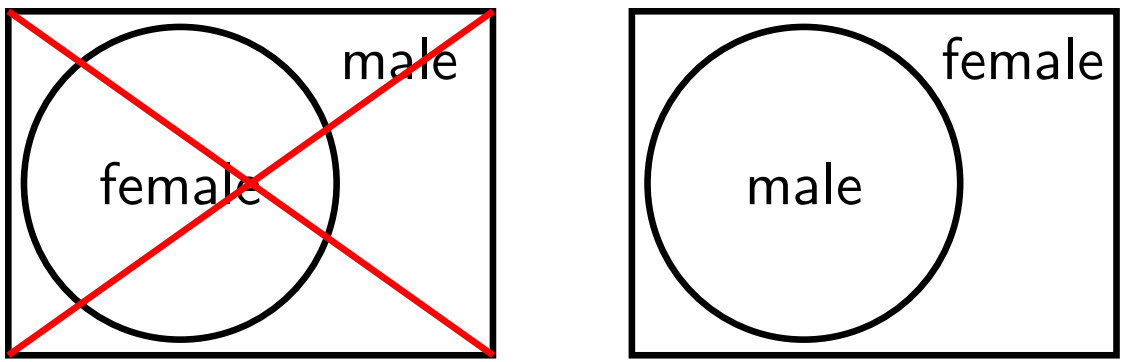


Relational definition (incorporation)

- $\neg P$ doesn't have a positive identity

In the phallic drama of this p-centred account, there is really only one actor, p, and ¬p is merely its receptacle. (Plumwood 1993: 454)

Patriarchy:



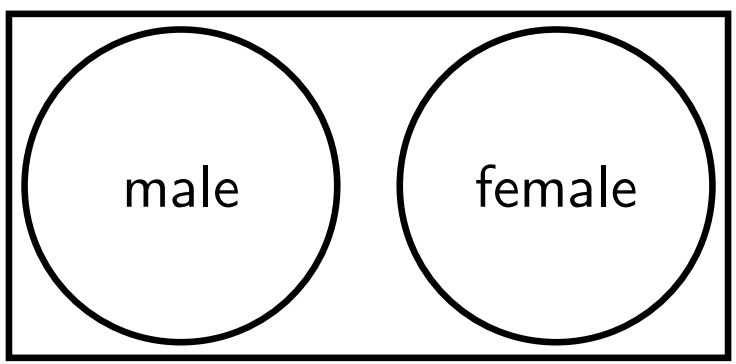
[Woman] is defined and differentiated with reference to man and not he with reference to her; she is the incidental, the inessential as opposed to the essential. He is the Subject, he is the Absolute – she is the Other. (Simone de Beauvoir 1956: 16)

Radical exclusion (hyperseparation)

- P and $\neg P$ mustn't co-occur

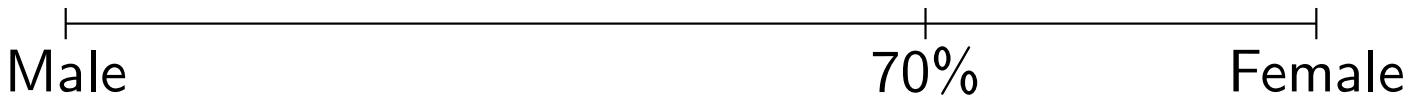
  The radical exclusion aspects of classical otherness are evident in the classical treatment of contradictions as implying everything, for the effect of $(p \wedge \neg p) \rightarrow q$ *is to keep* p *and its other or negation at a maximum distance, so that they can never be brought together (even in thought), on pain of the maximum penalty a logical system can provide, system collapse. (Plumwood 1993: 455)*

- **unlike the previous two**, this applies to contrariety:



The gender spectrum: a different logic of gender

- radical change in semantics: gender as a matter of degree



Ashley Tauchert (2002):

> *[A] non-binary understanding of difference that takes us beyond either/or [...]. (p. 34)*

- it can be (re)interpreted via fuzzy logic
- truth value ranges between 0 and 1 (or 0% and 100%)
  (continuum-valued sematics)

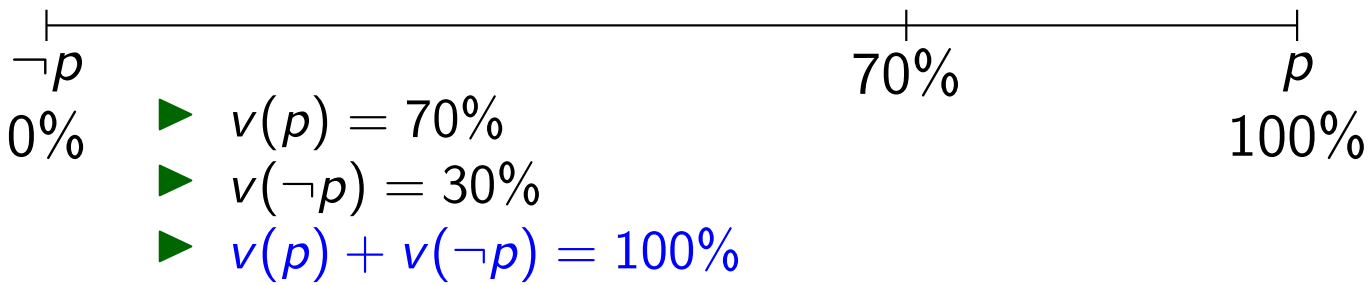
- percentages, but not in probabilistic sense (e.g., frequency)
- instead, metaphisically: *"I am* 67% *good at basketball."*
  "I am 70% *female."*

It's still negation

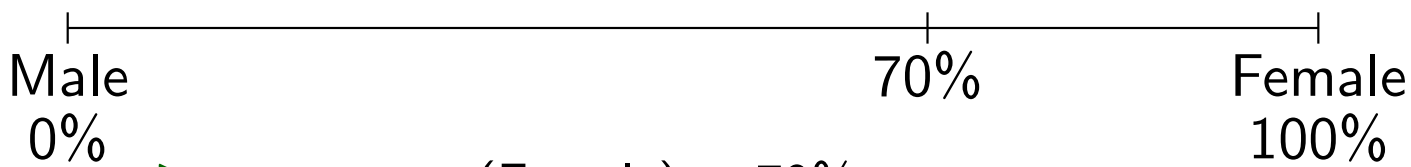
In fuzzy semantics:

If p is 70% true, then it is 30% false.

(If p is 70% true, then $\neg p$ is 30% true.)



- $v(p) = 70\%$
- $v(\neg p) = 30\%$
- $v(p) + v(\neg p) = 100\%$



- percentage(Female) $= 70\%$
- percentage(Male) $= 30\%$
- Male vs. Female $=$ P vs.$\neg P$

Fuzzy contradiction

- the opposition in the gender spectrum – fuzzy contradiction:

1. fuzzy jointly exhaustive:
   - values add up to a 100% – exhaust "the whole truth"
2. fuzzy mutually exclusive:
   - *can* co-occur, however:
   - one value grows *at the expense* of the other
   - the predicates "fight for logical space"

Advantages of the gender spectrum

1. allows for infinitely more gender identities
   - continuum-valued vs. two-valued semantics
2. takes care of radical exclusion (hyperseparation)
   - predicates “Male” and “Female” can co-occur
3. takes care of homogenization (stereotyping)
   - there are differences between members of $\neg P$
   - 27% female, 50% female, 99% female...

Disadvantages of the gender spectrum

1. suffers from relational definition (incorporation)
   - it's redundant to say that one is 80% male and 20% female
   - one term can be disregarded – "there is really only one actor"
2. doesn't move (that far) away from binarism
   - there sre still two hegemonic poles/gender categories
3. doesn't allow for agender identites
   - every identity is on the "gender line"

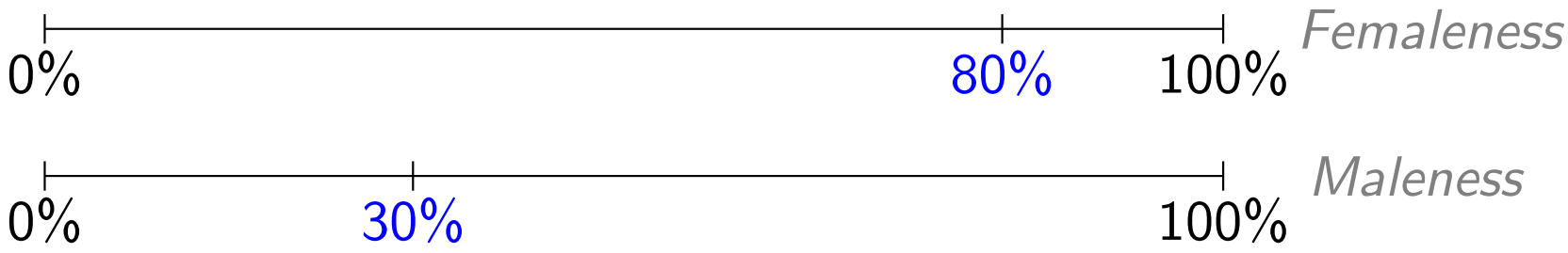
Multispectral models of gender

- offer more, independent, gender continua
- no opposition between the gender categories
- one value says nothing about the other(s)

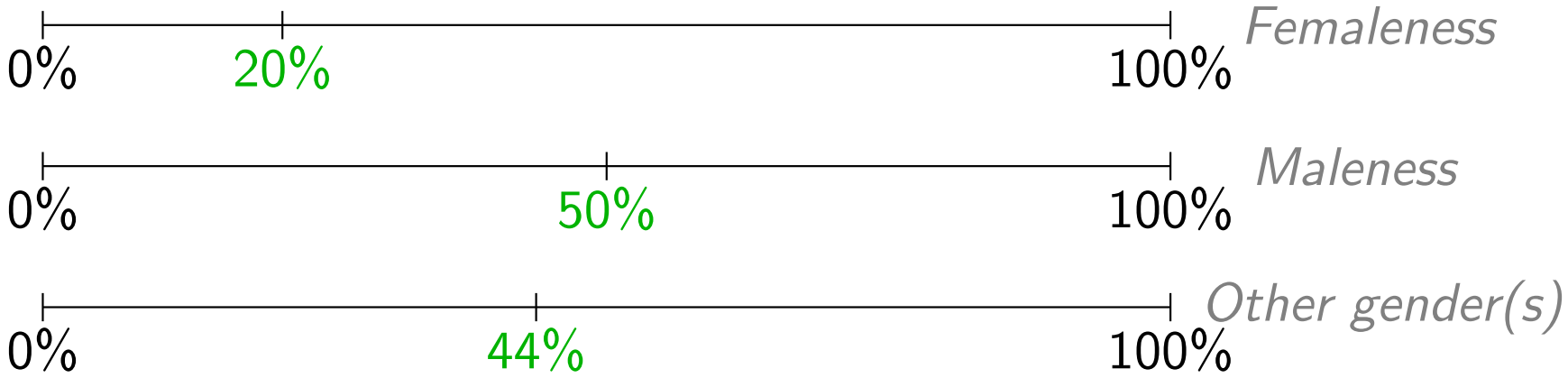
1. the bispectral model
   - (Magliozzi, Saperstein, and Westbrook 2016)
   - femininity scale and masculinity scale
2. the trispectral model
   - (Ho and Mussap 2019)
   - femininity scale, masculinity scale, and a scale for other gender(s)

Multispectral models of gender

The bispectral model:



The trispectral model:



Advantages of the multispectral models

1. allow for infinitely more gender identities
2. take care of radical exclusion (hyperseparation)
3. take care of homogenization (stereotyping)

4. take care of relational definition (incorporation)
   - we need *all* the values

5. the trispectral model moves away from binarism

6. somewhat allow for agender identities
   - one can leave some "empty" space on the right-hand side of the gender continua

Disadvantages of the multispectral models (I)

1. don't represent agender identites in a straightforward way

E m i n a :

- 80% female
- 60% male
- 40% other genders

- 20% non-female
- 40% non-male
- 60% non-other-genders

How much (if at all) is Emina agender?

- out of 300%, there is 120% of "empty" space
- ⊢ Emina is 40% agender

However:

- the percentage of agenderness needs to be calculated (it is "graphically misrepresented")
- adding a scale for agenderness doesn't help

Disadvantages of the multispectral models (II)

2. some identifications are ambiguous

I v a n :

- 0% female
- 100% male
- 0% other genders

- 100% non-female
- 0% non-male
- 100% non-other-genders

How much (if at all) is Ivan agender?

- out of 300%, there is 200% of "empty" space

$\vdash$ Ivan is 67% agender

However:

- that's not what I wanted to report
- a person who is 33% male and 67% agender would have the same result

A step back towards *fuzzy contrariety*

With fuzzy contrariety, predicates *Male* and *Female*:

1. fuzzy mutually exclusive
   - the more one is male, the less they are female (and vice versa)
2. not fuzzy jointly exhaustive
   - the values don't add up to a 100%
   - leaves space for other gender categories

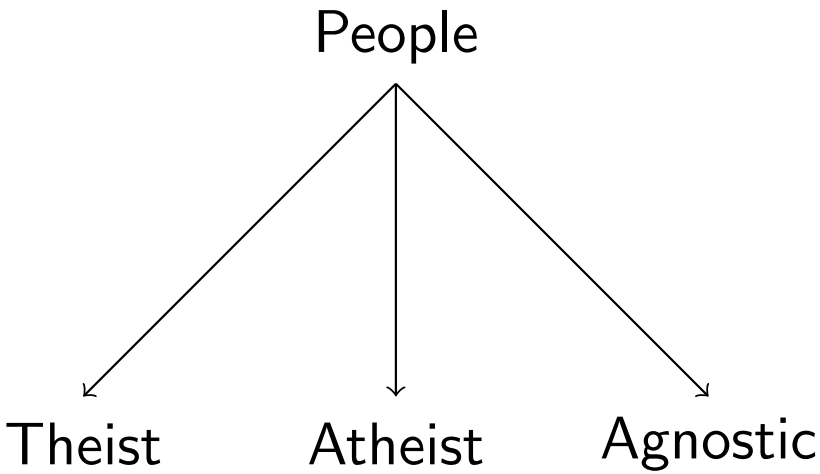
- found in the fuzzy logical hexagon
  - fuzzy version of the *classical logical hexagon*

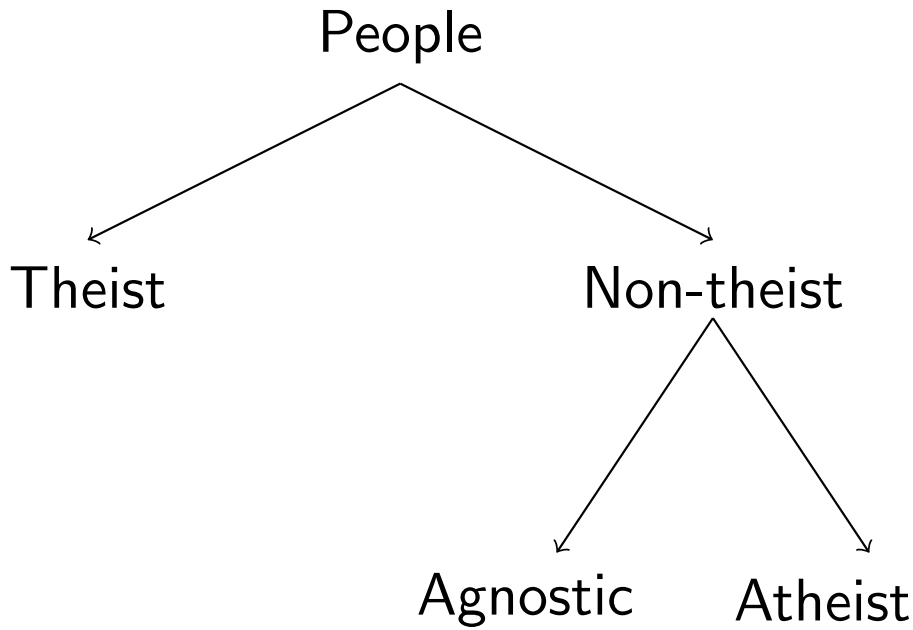
In the fuzzy logical hexagon:

- $v(Male) + v(Female) < 100\%$
- $v(Male) + v(Female) + v(AdditionalCategory) = 100\%$

Describing trichotomies: The classical logical hexagon

- the classical hexagon: a tool for describing trichotomies (among notions that don't come in degrees)





The conceptual truths:

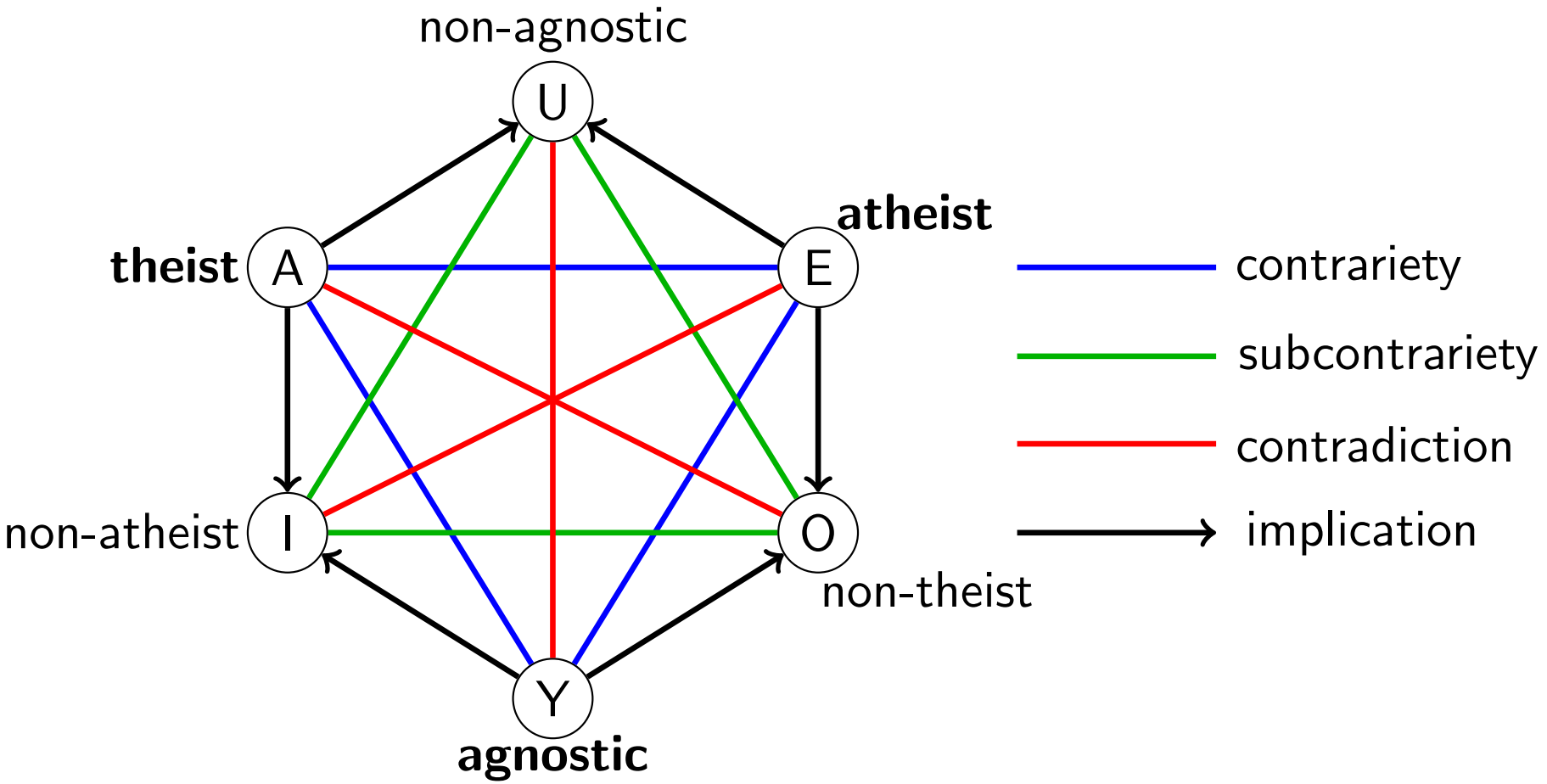
1. If one is an atheist, they are not a theist.
2. One can be neither a theist nor an atheist.
3. If one is neither an agnostic nor an atheist, they are a theist.

...

The religious belief hexagon

Recipe:

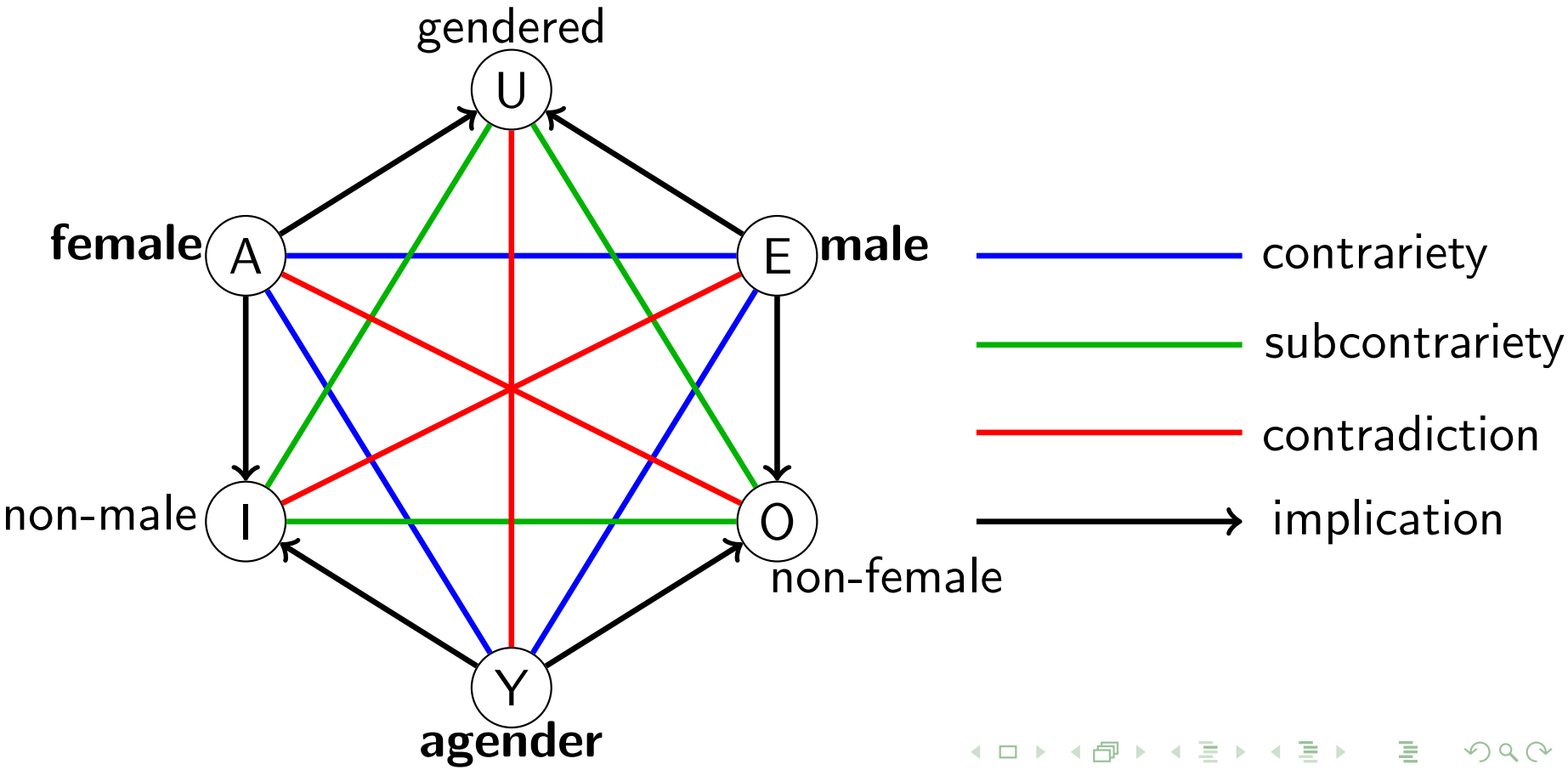
1. put the trichotomous notions in the "triangle of contraries" ▽
2. decorate the remaining corners with negations accordingly —



The (fuzzy) gender hexagon

- another decoration: gender categories
  - trichotomy: *male*, *female*, *agender*

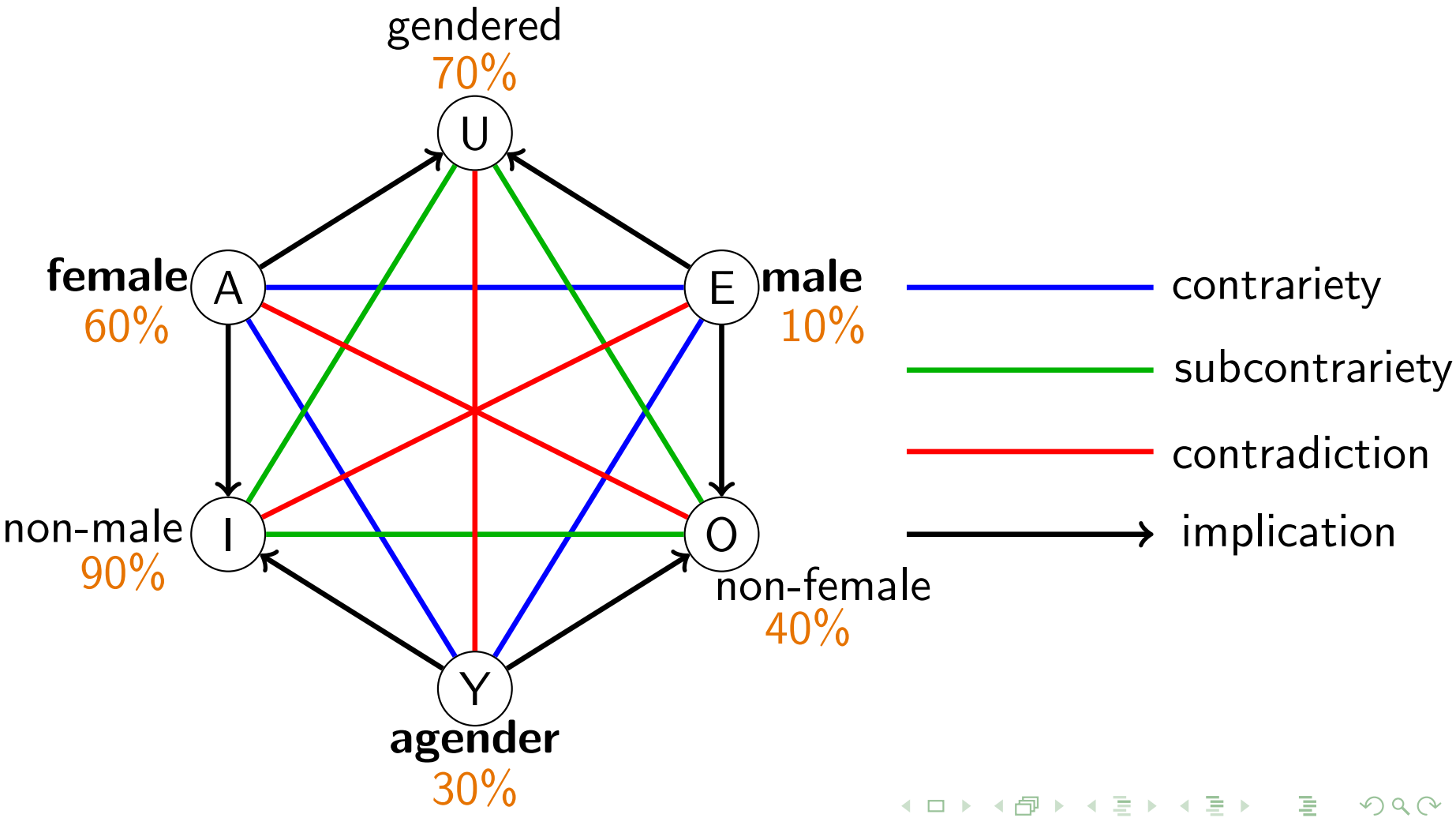
A) the terms don't come in degrees: classical logical hexagon
B) the terms come in degrees: fuzzy logical hexagon



The fuzzy gender hexagon

The rule of the fuzzy logical hexagon:

- $v(A) + v(E) + v(Y) = 100\%$ (*the triangle of contraries* $\bigtriangledown$)



Advantages of the fuzzy gender hexagon

1. allows for infinitely more gender identities
2. takes care of radical exclusion (hyperseparation)
3. takes care of homogenization (stereotyping)

4. seems to take care of relational definition (incorporation)
   - we *don't* need all the values, but
   - one value (e.g., maleness) is not enough

5. moves away from binarism
   - $v(Male) + v(Female) + v(Agender) = 100\%$

6. straightforwardly allows for agender identities

7. there is no ambiguity (like in the multispectral models)

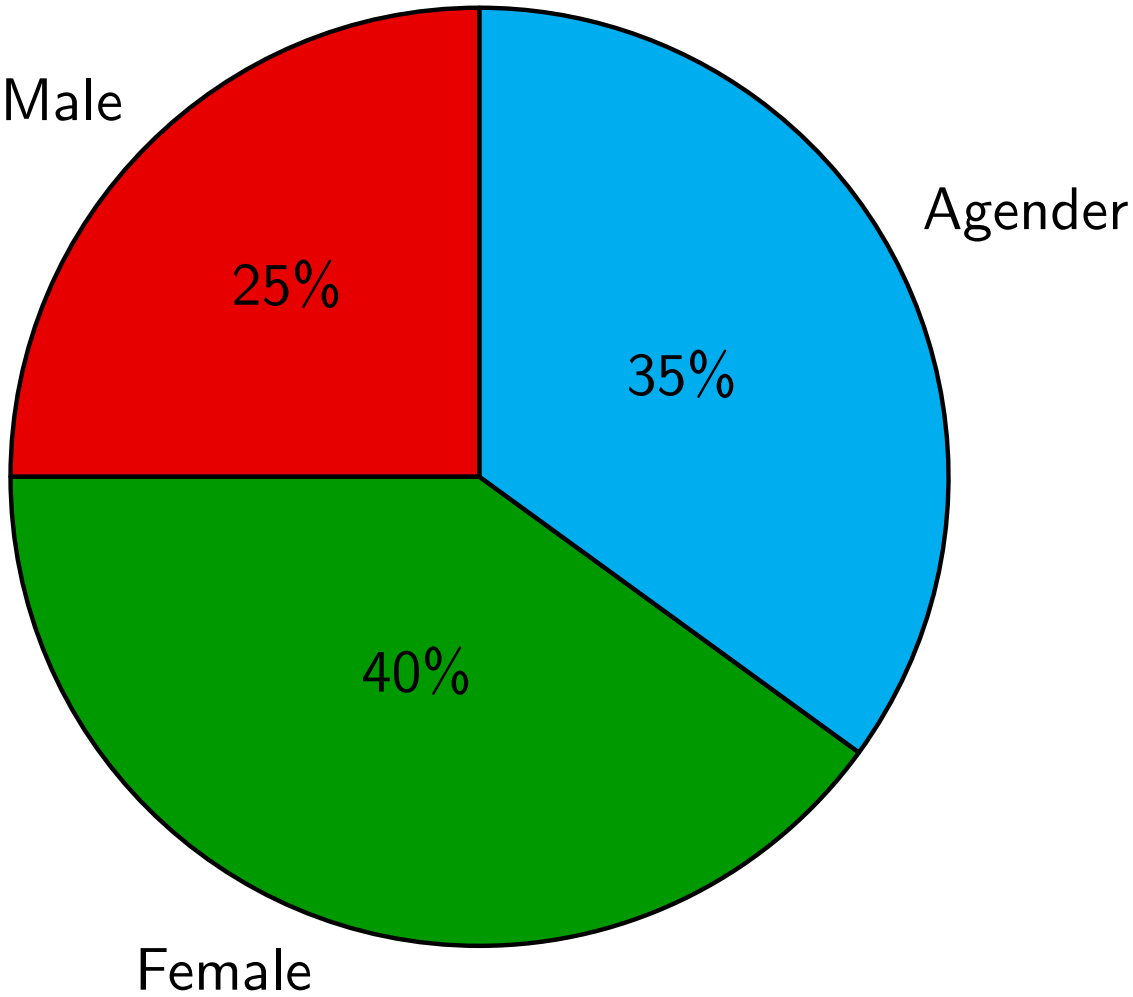
Disadvantages of the fuzzy gender hexagon

1. doesn't allow for other genders
   - this can be fixed by more complicated structures of opposition: $v(Male) + v(Female) + v(Agender) + v(OtherGender(s)) = 100\%$
   - the opposition would still be fuzzy contrariety

2. excludes some identities available in the multispectral models
   - one cannot be 100% male and 100% female
   - a feature of fuzzy contrariety and cannot be fixed
   - the best it can offer is 50% male and 50% female

A simpler representation of the fuzzy gender hexagon

- $v(Male) + v(Female) + v(Agender) = 100\%$



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