

# From Gender Binary to Gender Identity (Qua)Ternary

V1.0, comments are appreciated

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## Abstract

Gender theory still reflects the binary origins of thoughts on gender: male or female. Gender may be thought of as ternary including a third ‘neutral gender’. Ternary gender terminology turns out to be confusing more often than not. We suggest to incorporate gender identity as a first class component in ternary gender theory.

## 1 The gender binary is becoming outdated

We assume that biological sex for humans admits a neutral category meant for the classification of individuals for whom either of the signed categories (sex labels) male and female is inapplicable. We prefer to minimize the use of the term nonbinary for reasons that were set out in [8]. We prefer to speak of male and female as signed labels for biological sex

and/or gender. We consider both the biological sex binary as well as the gender binary (meant as true principles about human life) to be outdated relics from past times which should not be taken as a point of departure for further development of gender theory. The small fraction of persons to whom a signed b-sex, and for that reason as signed gender cannot be assigned must be taken into account, and doing so refutes the binary model.

The latter assertion is not uncontroversial, as it implies that we hold that the official RCC view on matters of gender (see e.g. [11]) is outdated in scientific terms. Whatever the value or use of the RCC has been in the past, its validity has become so problematic that a revision is needed. We are very aware that such processes take ample time and that it would be wrong to expect the RCC to change its views overnight rather than with process that may easily take decades if not centuries, we also accept that a formidable resilience against ideological change constitutes a key value of institutionalized religion which comes at a price. We assume nevertheless that a gender ternary rather than a gender binary will lie ahead of us.

## 2 The gender (qua)ternary

It seems to us that a common perspective on gender categorization (following the terminology of Barnes 2022 [1]) is as follows:

(i) an adult human (in the terminology of say Byrne 2020 [9]) is either a man, or a woman, or a non-binary person, and

(ii) a non-binary person is someone who neither identifies for 100 % as male nor identifies for 100 % as female,

(iii) the mentioned three categories apply to all individuals and are mutually exclusive (the gender ternary principle).

Taking (i) and (ii) together one may conclude that a man self-identifies as male for 100 % and a woman self-identifies as female for 100 %. However, we support the following Claim:

**Claim 2.1.** *A man may self-identify as male for less than 100% and a woman may self-identify as female for less than 100 %.*

In other words: we do not believe that it is practical to characterize a non-binary person as a person for whom both 100 % self-identification as male and 100% self-identification as female fails to apply.

**Claim 2.2.** *The use of neutral (and of non-binary) gender must be embedded in (explained on the basis of) a version of gender theory which explains male and female gender as well.*

**Claim 2.3.** *The use of neutral (and of non-binary) gender identity must be embedded in (explained on the basis of) a version of gender theory which explains male and female gender identity as well.*

For the signed gender labels male and female there is an extensive though) disparate literature regarding the conditions under which a person is a man or is a woman. In the case of the non-binary gender there seems not to be much philosophical literature on that matter. in any case we advocate the use of a  $3G_{\perp}$  (also: (qua)ternary) model.

**Definition 2.1.** ( $3G_{\perp}$  model) *2G gender labels are male and female, also called signed gender labels.*

*3G gender labels are: male, female, and neutral. The fourth label is  $\perp$  indicating the absence of information about gender.*

*Each person at any time is supposed to ‘have’ a gender male, female, or neutral. However, the gender of a person may not be known.*

*A gender kind of gender  $g$  is the category of persons having gender  $g$ . The gender kinds for male, female, and neutral are disjoint.*

Remarkably the  $3G_{\perp}$  model does not provide an obvious explanation of the term ‘non-binary’. However, the phrase non-binary gender is well-understood as follows.

**Definition 2.2.** *A person  $P$  has non-binary gender if the gender of  $P$  is neutral.*

We adopt the following conventions:

(i) When reading the adjective ‘non-binary’ in a text we will first of all understand that as ‘having a non-binary gender identity’.

(ii) Only if it is made explicit that ‘non-binary gender’ is actually meant, we will read the adjective non-binary as ‘having a non-binary gender’.

(iii) We resist any implicit identification of ‘gender’ and ‘gender identity’. Some versions of gender theory adopt that identification, while other versions of gender theory do not.

### **3 Separating categorization from gender self-identification**

Following e.g. Barnes 2022 [1] we distinguish between gender identity and gender categorization. Gender categorization is the outcome of a categorization process which takes a person’s gender self-identification as one of various inputs. We find that a better phrasing for the gender ternary is in terms of gender identities:

### 3.1 The gender identity (qua)ternary

**Claim 3.1.** (Gender identity ternary assumption.) *There are three gender identities: male identity, female identity, and non-binary identity. These three identities apply to all adult humans for whom a gender is known and are mutually exclusive. If no gender identity is known the ‘gender identity’ is indicated as  $\perp$ .*

The gender ternary assumption does not presuppose and does not reject the controversial principle of the equivalence of gender self-identification (which determines gender identity) and gender categorization (which determines gender). For a critique of said principle of equivalence we refer to [7] and [1].

### 3.2 (Qua)Ternary claims for gender and b-sex

**Claim 3.2.** (Gender ternary assumption.) *There are three gender labels: male, female, and neutral. These three categories apply to all adult humans and are mutually exclusive. A person is neutral by definition when neither male nor female. If no information is known about gender that state of affairs is indicated with  $\perp$ .*

When no information on gender is known (i.e. all that is known is  $\perp$ ) one may see this as an indication to categorize a person as neutral. However, the latter categorization is unwarranted because neutral gender incorporates the presence of information about the non-applicability of male and female.

Gender may but need not be identified with b-sex (biological sex in the notation of [2]). In [3] we argue, thereby contradicting the thesis of [9] that gender and b-sex can (and must) be distinguished. We wish to notice that we reject the TERF claim that transgenering is impossible by definition. Systematic surveys of arguments against the TERF position can be found in [10] and [13].

**Claim 3.3.** (B-sex (qua)ternary assumption.) *There are three labels for b-sex (biological sex): male, female, and neutral. These three identities apply to all adult humans and are mutually exclusive. A person is of neutral b-sex by definition when (positively) neither male nor female. in the absence of any information the b-sex of a person is denoted as  $\perp$ .*

B-sex is by no means a concept about which a universal consensus can be found. However, the b-sex ternary assumption can be maintained for a range of different definitions of b-sex. For instance supporters of the b-sex binary may express their views by claiming that the neutral b-sex category is empty.

## 4 Accusations: the accusation of being gender critical

In [2] we have surveyed accusations which play a role in the world-wide debate on gender. For the notion of an accusation we refer to [5, 6].

A common accusation is of being gender critical. Consistent with [13] we hold that gender critical refers to views which adopt the possibility of transgending after medical affirmation treatments. We adopt the following description of being gender critical.

**Claim 4.1.** *Gender-critical refers (by way of an accusation) to those who support opposition to the idea that whoever adopts a certain gender identity is entitled without reservation to the corresponding gender categorization.*

Our proposal for a gender identity ternary as a leading principle is based on a distinction between gender categorization and gender identity. Following the above Definition of what ‘gender critical’ means our proposal itself expresses a gender critical attitude, and for that reason may invite some to express their disagreement with our proposal by way of an accusation of us (or our views) being gender critical. We will not deny, reject, or even oppose such an accusation. We refer to the website of the ‘Gender Critical Research Network’ (Open University UK<sup>1</sup>) for additional information concerning workers in gender studies who self-classify as being gender critical.

## 5 Concluding remark

Speaking of the gender identity ternary extends the language of formal gender theory without changing much of its content. Personally we hold that the neutral gender tends to be overextended to cases without sufficient grounding, which may be detrimental for the persons involved. We also believe that gender identity is not the only factor which determines gender, and that a proper understanding of gender requires a compromise between taking body and mind into account. Further we believe that primary and secondary gender identity ought to be distinguished where androgyny (which recently was positively recalled in [12]) opens the door to conceptualizing secondary gender identity.

We conclude with a remark on the distinction between neutral and  $\perp$ . It is because of the presence of neutral that  $\perp$  matters. Care has to be taken that neutral gender is not playing the role of a default gender in the absence of sufficient and credible information about a person’s gender.

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<sup>1</sup><https://www5.open.ac.uk/health-wellbeing/research-themes/gender-critical-research-network>

## References

- [1] Elizabeth Barnes. Gender without gender identity: the case of cognitive disability. *Mind*, 131 (523) 838-864 (2022).
- [2] Jan A. Bergstra and Laurens J. Buijs. Formal Gender Theory: A Logical Perspective on Dembroff versus Byrne. AGTRT Report 1, <https://gender-theory.org/reports/agtrt-1-formal-gender-theory> (2023).
- [3] Jan A. Bergstra and Laurens J. Buijs. Biological sex as used in Dembroff versus Byrne. AGTRT Report 4, <https://gender-theory.org/reports/agtrt-4-biological-sex> (2023).
- [4] Jan A. Bergstra and Laurens J. Buijs. Jurisdictions and gender categorization protocols. AGTRT Report 5, <https://gendertheoryorg.files.wordpress.com/2023/07/gencp.pdf> (2023).
- [5] Jan A. Bergstra and Marcus Düwell. Accusation theory. *Transmathematica*, <https://doi.org/10.36285/tm.61>, (2021).
- [6] Jan A. Bergstra and Marcus Düwell. Special accusation types: anonymous accusation, non-evidential accusation, and self-accusation. *Transmathematica* <https://doi.org/10.36285/tm.85>, (2023).
- [7] Tomas Bogardus. Why the trans inclusion problem cannot be solved. *Philosophia* <https://doi.org/10.1007/s11406-022-00525-9> (2022).
- [8] Laurens J. Buijs and Jan A. Bergstra. Gender triangularity versus gender neo-imperialism and neutral versus nonbinary. AGTRT Report 3, <https://gender-theory.org/reports/agtrt-3-gender-triangularity/> (2023).
- [9] Alex Byrne. Are women adult human females? *Philos Stud*, 177, 3783–3803 <https://doi.org/10.1007/s11098-019-01408-8>, (2020).
- [10] Hendry F. Fradella. The Imperative of Rejecting ‘Gender-Critical’ Feminism in the Law. *William & Mary Journal of Race, Gender, & Social Justice*, 30 (2), <http://dx.doi.org/10.2139/ssrn.4419750>, (2023).
- [11] Giuseppe Versaldi and Angelo Vincenzo Zani. Male and Female he Created Them-towards a path of dialogue on the question of gender theory in education. Congregation for Catholic Education, Vatican Press <https://www.vatican>.

va/roman\_curia/congregations/ccatheduc/documents/rc\_con\_ccatheduc\_doc\_20190202\_maschio-e-femmina\_en.pdf (2019).

- [12] Wissenschaftsrat. Empfehlungen zur Weiterentwicklung der Geschlechterforschung in Deutschland. [https://www.wissenschaftsrat.de/download/2023/1385-23.pdf?\\_\\_blob=publicationFile&v=12](https://www.wissenschaftsrat.de/download/2023/1385-23.pdf?__blob=publicationFile&v=12) (2023).
- [13] Aleardo Zangellini. Philosophical Problems With the Gender-Critical Feminist Argument Against Trans Inclusion. *Sage Open* <https://doi.org/10.1177/2158244020927029> (2020).