

Analytical Gender Theory: an Integrating Perspective on Archer versus Bem

V0.28 comments are appreciated

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Abstract

This work is a follow-up on our paper on formal gender theory (FGT). Using the terminology and notations of FGT we highlight androgyny as the main source of an approach to gender theory which is termed analytical gender theory (AGT). We understand AGT as an integration of the contrasting views of Sandra Bem and John Archer, glued together with analytical intuitions of Carl Jung, and enriched with aspects of Maslow's humanistic psychology. We propose gender triangularity as a reference to the methodology thus obtained. Gender triangularity is to be distinguished from various forms of mono-angular-gender theory of which the purely gender non-critical version of gender theory, the mono-angular perspective on matters of gender taking gender identity as the principal core, is an instance.

We contrast an AGT approach to gender theory with the gender non-critical version of FGT, a version of which we qualify as a pseudo-science. We qualify analytical psychology as a proto-science, whereby its incorporation in AGT creates some risk for the development of AGT. Hopefully the evidence based approach of John Archer compensates for that risk.

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1 Introduction

As we have noticed, theory papers in gender studies regularly feature some autobiographical remarks by the author or authors. We have a few of such lines too, because that may help readers to understand where we come from, and where we are heading for. Both of us are cis-gender male, currently without any expectation of transgendering in either direction woman or neutral.

One of us (LJB) has recently come under heavy fire from the side of aggressive gender transactivists. JAB got accidentally involved in these matters from early February 2023 onwards and he is quite surprised about the level and volume of personal attacks on LJB to which the self-identified gender transactivists feel entitled. Whatever the value of the feminist cause for the motivation of gender studies may amount to, for JAB there is no room for any denial of the fact that LJB has been deeply wronged by gender transactivists. We assume that the actions of said gender transactivists are understood by them to be justified on the basis of their preferred account of gender theory, an account which must, if only for that very reason, be deeply flawed. Our objective is to find a workable reading of gender theory which does not justify the inexcusable engagement in a new tradition of wrongs, even if these novel wrongs may be considered minor in comparison to the extensive historical wrongs which gender theory, in the last 50 years of its steady growth to remarkable and admirable prominence, has been meant to combat.

We are aware of Dembroff 2022 [27] and their convincing argument for repositioning transgender identity as a component of a larger complex with transgender experience in its center. However, we do feel that [27] proceeds on a path of scholarly writing where everyone who is in disagreement with what is written may easily be qualified as a problematic (if not right-wing) opponent of transgender rights. To the extent that papers like [27] can be used to justify manifestly aggressive transgender activism we see a problem. A (rhetorical?) question emerges: is it possible to disagree with Dembroff without being condemned of serious misunderstandings, or even of bad intentions, or even worse of not being well-gendered for their permission to participate in the debate at all? As an emotional outcry [27] is convincing, as an exclusive claim on “truth” proclaimed at the expense of respectability of other authors [27] is unconvincing, however.

LBJ came under fire because of his suggestion in [22] that the scientific basis for neutral gender categorization is defective and unconvincing. We will comment in some detail on these matters in Subsection 3.3 below.

This paper is a sequel to our [13] and we will sometimes use terminology from that paper without further explanation. The focus of our investigation comes about first of all from the contrast between the views concerning gender of Sandra Bem and Carl Jung.

Jung proceeds on the basis of Freud and in part deviates from Freud. Where Freud uses mythical metaphors to postulate psychological mechanisms such as the Oedipus complex, Jung simplifies the discussion of gender by leaving behind the mythical background and focusing on a postulated symmetry in the partly unconscious psychology of gender identity. Nevertheless followers of Jung come close to the reintroduction of myths, see e.g [33]. Jung's animus/anima theory suggests that a person will unconsciously host a psychological representation of the sex opposed to their own sex (that is b-sex in the notation of [13]). Jung's ideas are firmly rooted in a 2G framework (two genders: male and female) which supposedly allows to categorize every person. What Jung suggests, however is a positive interpretation of being non-male (anima) as well as a positive representation of being non-female (animus). Combining animus and anima on one person might be a characteristic of the neutral gender. Other positive aspects of neutral gender may come about from contemplating androgyny.

From about 1970 Sandra Bem adopted androgyny as a leading perspective on matters of gender. She did away with the mechanisms postulated by Jung and took a more classical psychological approach with a psychometric flavour. For Bem it was still the case that the framework of gender labels is binary (a 2G framework) but she understood male and female as extremes lying on an outer border of a space of options for persons combining some male traits with some female traits. A symbolic (in fact arithmetical) representation of this space is hard to find but the interval of rational numbers $[-1, 1]$ will do where -1 represents male, 1 represents female, and there is a linear scale in between, with 0 representing the 3G gender neutral.

We feel that the use of analytical psychology provides a hook for possible irrational emotions which are all over the place in processes concerning gender. At the same time the heritage of Carl Jung comes with outdated stereotypes on male and female behaviour which must not be imported in our discussions. Instead we expect that a more up to date account of male versus female behaviour can be found in the work of John Archer e.g. [3]. Combining such work with analytical psychology and with Bem's account of androgyny a useful notion of psychological sex (p-sex) may be obtained on the long run, complementary to the notion of biological sex (b-sex).

1.1 Plan of the paper

The main message of the paper is to indicate in a comprehensive manner a pathway along which androgyny may be (re)introduced into gender studies, as well as providing arguments on why doing so is of relevance. We will try to make several points in this work:

1. We will contrast what we call analytical gender theory (AGT, as based on androgyny and analytical psychology) with formal gender theory and in particular with a

currently fashionable brand of gender non-critical gender theory which is based on the strong primacy of self-identification hypothesis.

2. We will argue that where gender non-critical GT based on the strong primacy of self-identification hypothesis seems to operate as a pseudo-science, AGT due to its import of speculative aspects of Jung's analytical psychology avoids being dismissed as a pseudoscience although it has not yet progressed beyond the stage of a proto-science. (By importing outdated elements of Freud's psychoanalysis into AGT we would run the risk of turning AGT into an outdated approach right from the start and for that reason such proposals are not made. There is already a risk that the introduction of elements of Jung's theories imports ideas which must be considered outdated)
3. By merging a Bem style approach to androgyny with analytical psychology a "mix" (i.e. AGT in an initial stage) is obtained which may be qualified as a proto-science with healthy perspectives. By incorporating work in the style of Archer [3] the psychological basis of working on sex differences can be strengthened beyond what was achieved already by Bem.
4. By incorporating (in AGT) the vision of high potential androgyny as put forward by Maslow and as maintained in Maslow's humanistic psychology, the potential impact of AGT is hopefully increased.

2 Analytical gender theory (AGT)

Analytical gender theory (AGT), is an approach to gender theory in which one attempts to provide intrinsic characterizations of gendered personal, properties, traits and qualities. Such intrinsic properties and traits may be observed, determined, and felt both from inside a person through means of self-analysis and from outside a person as a matter of judgement and discernment by other persons, groups and systems.

We intend to outline AGT in such a manner that relations with FGT are discussed and hopefully clarified. We will first be precise about what a gender critical position is, and then we will notice that AGT is necessarily tolerant for gender critical positions as much as it is tolerant for gender non-critical positions. In other words gender criticality is an issue outside AGT.

We understand AGT as a mono-angular approach to gender theory. Two other angles of attack on matters of gender are outside the scope of AGT: (i) social constructivism and (ii) gender identity. A mono-angular approach of gender theory may lead to what we will call the gender non-critical position, a position which we consider flawed in terms of

scientific quality. However, in spite of the judgement of Gheaus 2022 [35] that the notion of gender identity is unhelpful for gender studies, and in spite of Dembroff [27] where the claim is explained that transgender identity must give way to transgender experience as the key concept, we believe that gender identity is most important concept which will be investigated for many years to come and which will be of longstanding practical value.

We do not claim that any mono-angular approach to gender theory suffices, instead we expect that a triangular gender theory will be needed. Rowland 2023 [51] discusses the difficulties of a mono-angular gender theory based on gender identity, and in fact mentions several approaches towards the development of a bi-angular gender theory that combines the gender identity angle with the social constructivist angle while leaving out the AGT angle.

2.1 Gender critical positions versus gender non-critical positions

In view of the fact that nowadays it is considered so important whether or not a viewpoint on gender can be accused of being gender critical we will propose a reasonably precise definition of gender criticality.

Definition 2.1. (gender critical) *A person P is gender critical if P fails to agree with the claim that for all persons Q the gender categorization of Q must agree with the most recent self-identification of gender Q (if available).*

From the gender critical position we can derive what we will call the gender non-critical position.

Definition 2.2. (gender non-critical) *A person P is gender non-critical if P agrees as a matter of principle with the claim that for all persons Q the gender categorization of Q must agree with the most recent self-identification of gender Q (if available).*

The gender non-critical position will not ever allow to question, criticize, validate, try to validate, or even reject a person's self-identification of gender. We expect that these notions are of a temporary nature and that gender critical positions will become fashionable, or even dominant, but that future development is by no means certain. In contrast with Bogardus 2022 [17] we do not believe that the gender non-critical position is untenable because of being circular, uninformative, arbitrary etc.

We will assume that self-identification of gender only produces a gender in GEN (the 3G framework) if a person is competent for self-identification. In other cases the outcome is \perp ("Not a Gender", the peripheral gender of [13]).

Definition 2.3. (Weak primacy of gender self-identification hypothesis) *The weak primacy of gender self-identification hypothesis is the assumption that in an adequate society gender categorization and gender self-identification may find an equilibrium in which for all persons Q the gender categorization of Q at all times agrees with the most recent self-identification of gender Q (if available).*

The weak gender primacy of self-identification hypothesis expresses the consistency (coherence) of the gender critical position. The following definition incorporates the so-called counterintuitive claim 1.3 of [13] as a named hypothesis.

Definition 2.4. (Strong primacy of gender self-identification hypothesis) *The strong primacy of gender self-identification hypothesis is the assumption that in every adequate society gender categorization and gender self-identification may find an equilibrium in which for all persons Q the gender categorization of Q at all times agrees with the most recent self-identification of gender Q (if available).*

Definition 2.5. (Gender non-critical positions) *A position (i.e. a theoretical position in gender theory) is gender non-critical if it adopts the strong primacy of gender self-identification hypothesis.*

Different gender non-critical positions may differ in the underlying notion of competence of agents regarding the ability for self-identification of gender.

2.2 AGT is 3G gender agnostic

AGT does not support or claim to support gender categorization of persons in a 2G, 3G or $3G_{\perp}$ gender framework. If AGT is used for gender categorization a more refined framework is needed, though examples of such frameworks are hardly found in the literature on androgyny (and not at all in the literature on analytical psychology which traditionally uses a 2G gender framework).

AGT may certainly support gender self-identification. But AGT comes no further than that. We will express the latter by qualifying AGT as 3G gender agnostic. AGT may not be $3G_{\perp}$ agnostic because AGT is consistent with the idea that all individuals are assigned the peripheral gender \perp . Sandra Bem initially thought that by using psychometric means the relevance of the male-female constraints could be downplayed so much that eventually the male-female binary would disappear. Later she agreed with Judith Butler that some form of disruption will be needed if her own perspective is to survive. The relation between AGT and gender self-identification is as follows: gender self-identification may or may not be AGT-informed. In the AGT-informed case a person who is about to self-identify gender will know the principles and basics of AGT.

2.3 Science, anti-science, pseudo-science, and proto-science

Sciences that primarily matter for issues of gender are medicine, psychology, and sociology. We assume that it is known in principle what content belongs to the various sciences and what does not. Scientific content may be invalid, in which case hopefully proper application of scientific methods will uncover such problems. We assume that androgyny has started its existence as cultural content outside the sciences and that Sandra Bem may be credited with a successful attempt to incorporate aspects of androgyny in psychology in such a way that nowadays ‘androgyny’ may be used in scientific discourse. We will discuss three kinds of science-like activities which do not, or not yet qualify as science. Anti-science, pseudo-science, and proto-science. Such activities are unscientific, each in their own way.

2.3.1 Three characterizations

Marcus Düwell (private communication) has suggested the following characterizations:

(i) Anti-science is a position that denies the of authority of academic research in matters that are in principle open for research, that is matters in which one can expect that academic methods will be able to identify valid, true or adequate claims.

(ii) Pseudo-science is a position that claims academic authority in matters where there is no academic backing for such claims whatsoever.

(iii) Proto-science is a position where it is unclear to what extent the claims go beyond what can be seriously claimed against the background of academic debate at a specific time, while the issues at hand are in principle open to research.

We will discuss these issues below in various parts of the paper. Flat earth theory (FET) is an example of anti-science. FET will be discussed below, with the effect that the idea can be safely rejected that certain gender critical positions are unscientific to the extent that FET is. We will discuss Carl Jung’s analytical psychology at various places. We assume that parts of analytical psychology (e.g. the animus/anima theory) have the status of proto-science (as potential chapters of psychology). Proto-scientific content may very well have sound heuristic value. We have no prejudice against the use of proto-scientific content as long as such is done in a deliberated manner with an open eye for the potential weaknesses of the approach.

Pseudo-science deserves its name only and precisely if the claim is being made that an activity would have a scientific basis. Two bodies of knowledge that are considered academic lie outside the range, science, anti-science, pseudo-science, and proto-science: philosophy and religion. Both philosophy and religion use methods for which evidence as used in the sciences and in mathematics plays a much less prominent role. By turning a

philosophical position into a seemingly scientific position one may create pseudo-science. Similarly one may create pseudo-science by turning religious content into a seemingly scientific position (such as the rejection of evolution).

2.3.2 Is gender theory a part of science? And if not, so what?

Several authors of papers in gender theory firmly locate their work in philosophy, rather than in any of the sciences (including sociology, psychology, biology, and medicine). Adopting that point of view the debate about the scientific status of various chapters in gender theory becomes pointless. These are complicated considerations. The suggestion of Buijs in [22] that a certain chapter of gender theory is pseudo-scientific presupposes that it might have been scientific, which, however, is not the case if the issue is wholly philosophical (including ethics). Objections against Buijs' claim makes sense only against the same idea that in principle the chapter under debate might best be located in some science, perhaps in precisely the "Interdisciplinary Social Sciences" where Buijs' academic position is located.

Upon assuming that bespoke part of gender theory is a branch of philosophy rather than of sciences much of the debate regarding claims made in [22] seems to evaporate, including in fact some of these claims. Remarkably upon casting the debate about the status of gender-critical positions as a philosophical debate the issue becomes even more perplexing.

2.3.3 Key questions in gender theory as issues of philosophy

We will distinguish two conditions, not knowing which one of both pertains.

(A) Gender is a concept which eventually will have a proper definition, and we discuss gender as if that definition were available. We assume in addition that gender resembles biological sex (of which a neutral sex is presupposed as well).

(B) Gender is a concept without a definition, it is merely a label which a person assigns to themselves.

Under condition (A) it is counterintuitive to claim that a person can determine their own gender. The self-determination could be wrong (in the light of the presumed definition) and for that reason self-determination requires validation. It would now be a significant simplification of the conceptual framework to adopt the idea that a passport contains a field named *preferred gender* and that a person (above a certain age) is entitled to determine what will be written in that field, doing so upon having been informed about the expected societal consequences of that choice. In that case gender as occurring in a passport would

be treated just as the gender pronouns in a meeting: one indicates a preference and no more than that.

Under condition (B) it is futile to say that a person is entitled to the right to define their own identity. This right is given trivially by “definition” of gender.

However, a person might be granted the right to determine their own “legal gender” (gender as used in passports and so on) even when different from their proper gender (as determined via the given definition of gender).

From a logical point of view the situation is much more complicated than with abortion or with euthanasia. Both for abortion and for euthanasia one may think in terms of a definition of these actions and then, given such definitions, contemplate the rights of various actors as topics in ethics, a branch of philosophy.

Stating that a person has the right to determine their own gender becomes meaningful only if one reads this as: a person has the right to determine their own gender, and if one adopts option (A). But option (A) is a gender critical position. Ruling out all gender critical positions one is left with option (B) then to conclude that there is no issue of rights, and not even an issue of philosophy. Option (B) eliminates critical questions about gender by means of a linguistic action.

Whatever the outcome of these deliberations, we consider it to be entirely incomprehensible that opponents of gender critical positions do not understand that choosing option (B) is a fundamental choice which must be reflected upon academically and which cannot possibly be settled by a few papers written by a leftish self-appointed academic elite with a feminist background, an elite which at the same time struggles for primacy in the landscape of feminism.

2.3.4 Is gender theory in part political (science)?

We have arrived at the impression that gender theory in a gender non-critical style raises questions which may not even allow a convincing and principled philosophical analysis in view of the fact that a political discussion is at stake. The choice between (A) and (B) above seems to be a political one rather than a philosophical one. Casting the issues at hand as philosophical issues leads to the impression that we would now be developing pseudo-philosophy rather than philosophy proper, this in view of the ill-definedness of the concepts at hand.

2.3.5 Once more: why is there an issue at all?

From the website of The national Center for Transgender Equality (US based) we quote (April 7, 2023):

Nonbinary Defined

Most people—including most transgender people—are either male or female. But some people don't neatly fit into the categories of "man" or "woman," or "male" or "female." For example, some people have a gender that blends elements of being a man or a woman, or a gender that is different than either male or female. Some people don't identify with any gender. Some people's gender changes over time.

People whose gender is not male or female use many different terms to describe themselves, with nonbinary being one of the most common (sometimes spelled with a hyphen, as "non-binary"). Other terms include genderqueer, agender, bigender, genderfluid, and more. None of these terms mean exactly the same thing—but all speak to an experience of gender that is not simply male or female. If you're not sure what a word means, you can usually just ask politely.

This text illustrates a range of complications:

(i) that persons using a word, say agender, would know what that means and be able to define it upon request (manifestly not the case given the complex philosophical discussion on these matters),

(ii) that there is clarity about the difference in meaning of the listed terms genderqueer etc. (no such thing can be extracted from the literature on gender studies),

(iii) that there is a state of "having a gender that is neither male nor female" which then serves as an incentive for people to explain their situation for which they may use different words (essentially this is a gender critical position),

(iv) that changing gender has anything to do with nonbinary gender,

(v) that having a gender different from male or female is a condition which is to be distinguished from not self-identifying with any (chosen from male, female) gender,

(v) the implicit suggestion that binary people neatly fit into male and female,

(vi) it is mentioned that some people's gender changes over time after mention is made of transgender people. This order of listing raises the following question: is there an assumption that transgender people are not transsexed by default?

(vii) The fragment 'But some people don't neatly fit into the categories of "man" or "woman," or "male" or "female."' suggests that fitting neatly in male or female would somehow be evidence against being nonbinary. But we understand that many nonbinary persons have b-sex male or female and nevertheless prefer to not to have the same gender as b-sex.

We find that no single line of the quoted text about nonbinary can be taken for granted.

As a second example we consider a fragment in [56] from which we take the following quote:

“We have a world in which we are finally counting these groups,” said Kay Simon, 28, an assistant professor at the University of Minnesota who studies the experiences of queer youth and their families. “You can’t identify as something if you don’t know what the word is.”

Simon grew up in Florida and Texas. “From a very young age, I kind of realized I was gay,” they said. “At the time, I probably could have told you that I felt different about my gender, but I didn’t have a word for it.”

The word was nonbinary, denoting a person who identifies with neither the male nor female gender.

From this quote one might conclude that being nonbinary is a state of a person which used to go unnoticed, in particular in times where people had no opportunity to express themselves in that manner by lack of terminology. However plausible this text may seem to be at first sight, taken together with the (gender non-critical) dogma that exclusively self-identification as nonbinary serves as the criterion for categorization as having nonbinary gender the situation becomes highly puzzling. Counted as nonbinary are apparently also those people who would self-identify as being nonbinary upon having been informed about the existence of that term with the only defining property that male, female and nonbinary are mutually exclusive and that all people have one of these three genders. The problem is obvious: how can a person know which felt deviation from the ideal male or female identity should be taken as a trigger for self-identifying as nonbinary?

2.4 Comparing gender-critical positions with flat earth theory (FET)

In [21] Bracke implicitly suggests that a gender critical position such as put forward in [22] is out of date. We infer this suggestion from the timing of [21] in relation to [22] and the significant discussion that came about from [22]. So we read [21] as suggesting that the position of [22] would be out of date so much that adopting a gender critical position of that form may be compared to maintaining flat earth theory (FET). The comparison with flat earth theory is quite informative and intriguing for several reasons.

(i) First of all the mainstream scientific literature on geoscience pays no attention to FET, FET, if it ever has been an important viewpoint has been written off long ago (for instance Plato wrote about a spherical earth). The situation with gender critical positions

is utterly different where, as was established in [13] gender critical positions are frequently mentioned as well as defended in the mainstream literature on matters of gender right until the first quarter of 2023.

(ii) Secondly there is no indication in any state or culture popular support for FET is significant. Obviously the situation is completely different in the case of gender theory where most jurisdictions, and many religious groups, prefer one of its possible gender critical alternatives over the gender non-critical position.

(iii) If one tries to imagine how the world may work when FET is adopted one faces a substantial challenge. The idea that earth is spherical gives rise to a model which is so much simpler than its FET competitor that even as a thought experiment for the sake of amusement FET is hardly attractive. Contemplating potentially rewarding gender critical alternatives for the gender non-critical position is certainly possible as we claim to have demonstrated in [13].

(iv) We understand FET as an anti-science rather than as a proto-science or as a pseudo-science. Here following Kuhn a proto-science is a science-like package of ideas which may still develop into a science whereas a pseudo-science deviates much further from scientific method. An anti-science rejects firmly held and evidence based scientifically grounded beliefs.

We consider the rejection of evolution to be anti-scientific, whereas creationism would be a proto-science (as it is still possible that life was originally injected on earth from outer space etc.) FET, however, has been comprehensively refuted long ago, and there is no presentation of FET which even remotely looks like science. It is uncommon to maintain a list of proto-sciences but one might do so: the ideal that nuclear fusion can create usable energy thereby replacing conventional nuclear energy might be understood as a tenet of proto-science, and quantum computing might be perceived as a proto-science too.

Now we hold that various gender-critical positions do not contain any elements which have been scientifically refuted in remotely the same manner as FET has been refuted. For that reason gender-critical positions are not anti-scientific.

2.5 Summary w.r.t. AGT

For AGT we may now summarize some qualifications:

1. AGT refers to a theory which is under design, this paper providing an initial outline for it, in contrast with FGT which has been developed in considerable detail in our [13] already.
2. Unlike FGT, AGT will be meant primarily for use in clinical practice.

3. Developing AGT in sufficient detail for clinical practice will require a rather formidable survey of existing literature of which only a minimal fraction has been referenced in this paper.
4. Androgyny as imported in AGT combines scientific elements from psychology, mainly via the work of Bem and her successors with elements of proto-scientific quality from other sources.
5. Analytical psychology in as far it is imported in AGT introduces proto-scientific elements.
6. AGT is not based on any anti-scientific elements, neither is it based on any pseudo-scientific elements.
7. At the time of writing it is unclear to what extent philosophical elements will need to be imported in AGT.
8. Self-identification plays a minor role for gender categorization in AGT, so that AGT is biased towards being gender critical. Gender categorization, however, is by no means an objective of AGT.
9. AGT is not dependant on a notion of gender that deviates from b-sex, and AGT may very well be thought of as being created on the basis of natural gender (i.e. taking b-sex for gender).

3 Distinguishing modes of usage of the term gender

Besides distinguishing a plurality of assumptions about the meaning of the term gender we may also distinguish a plurality of modalities of its use. This is a rather difficult to grasp distinction because it may even differ from occurrence to occurrence in the same text. As an example we consider the remark made in Bracke 2014 [19] that masculinities and femininities cannot be thought without taking critical race theory into account. Can we conclude that according to Bracke a person who is unable to appreciate critical race theory (including one of the authors, say *A*) is for that reason unable to self-identify as male? Is *A* of neutral gender because of lack of political awareness (in this case lacking awareness of critical race theory)? Is it sufficient that other people, *A* excluded, think of *A*'s being male as a matter which, in spite of *A*'s lack of political maturity, is both true and not of top quality, or is there no such notion of quality to be maintained? Should *A* make use of the rule or exception as proposed by Barnes 2022 [5] where it is indicated that individuals who, because of cognitive limitations, are incapable of proper self-identification

ought nevertheless be gender categorized in their best interest by agents in a benevolent environment.

We think that none of the above remarks about how A can make sense of Bracke's remark in case of himself apply to the situation: Bracke's use of masculinity is what we will call a conceptual use of that term. In case of conceptual use it is ill-advised to experiment without further deliberation with application of the term with regard to a live and existing person (such as A).

In Buijs [22] it is stated that the NB gender is a matter of pseudo-science. As an instance of use of the term gender it is a conceptual use, because an assertion is made by Buijs about the scientific quality of the explanation of the concept of NB gender (of course meant at the time of writing, granting that the sought explanation can change and improve over time), Buijs considers said quality to be insufficient. This is a judgement he is entitled to make in principle, though in a scientific paper some arguments would be required for that sort of assertion. We have given such arguments in [13]. One may also look at the use of the term pseudoscience. Now the demarcation of science and pseudo-science is a non-trivial matter. We will comment about that issue in 3.3 below.

If in the same paper Buijs states that NB gender is a hype, then the use of (NB) gender is what we will call abstract categorizing. Neither use is personally categorizing. If thereafter a student states (and complains) that Buijs' claims do not respect their own sense of gender (in particular their own self-identification as being of NB gender) the latter use of gender is personally categorizing (as expressing actually revealed self-identification of gender of a specific person, thereby being indicative of said person's gender categorization depending on one's theory of gender).

3.1 Four modes of usage of the term gender

In order to clarify the various usages of gender, and in fact of words and phrases for concept in general we suggest to work with a classification allowing four kinds of usage. We will take for granted that saying (by person A) of a particular person (say B) that they (B) falsely claim to have neutral gender is (morally) wrong because when used in that manner the phrase neutral gender would clearly be used in a colloquial manner under the hypothesis that there is some common ground for understanding. Making a claim of this form (by A about B) is morally justified only when that has been preceded by a systematic and person independent discussion regarding gender categorization and validation thereof.

We will distinguish four uses of gender:

- (conceptual use) No immediate application to persons or groups of persons is admissible otherwise than as a mere (potentially informative) thought experiment.

- (abstract categorizing use) Abstract categorizing (a-categorizing) use of gender occurs if a statement about a group of persons is made where group membership is under conditions involving a mention of gender. It is implied that some operationalization of the term gender has been made which underlies the interpretation of the statement at hand. It is not implied that the generalization of use is sufficiently precise to be made use of when personal categorization is meant. For instance: “staff in elementary schools in ZZ is overwhelmingly female”. It comes without saying that the validity of the latter statement would hardly be changed if female is understood as AFAB.
- (personally categorizing use) Personally categorizing use occurs if a statement about a person is made, or a statement about a hypothetical person is made in a manner which might (consistently with the author’s intentions) be may in a similar manner about a real person.
- (quasi-personally categorizing use) Finally quasi-personally categorizing use of gender, takes place if gender is used conceptually though occurring in a form which is close to what (according to the author) might occur in personally categorizing use (as would be considered adequate by the author).

When writing in gender theory intend to be aware in any occurrence of “gender” of which of the four modes of uses as outlined above is meant. However, as a default we assume that unless explicitly stated otherwise (i.e. by default) gender is not used in a personally categorizing mode of use.

3.2 Some examples

The four modes of application of gender can be consider in connection with other concepts as well. We provide some examples.

3.2.1 Bracke on gender and critical race theory

Above when writing “Can we conclude that according to Bracke a person who is unable to appreciate critical race theory (including one of the authors, say *A*) is for that reason unable to self-identify as male?” this situation is such that (i) we are writing about an actual person *A* (one of both authors), so we cannot simply apply the usage of Bracke of gender which (not being stated otherwise) is not meant (that is: should not be read as being meant) as of a personally categorizing mode of use, so that none of the subsequent questions makes much sense.

3.2.2 Invalid replies as given for some “kamervragen” of March 31, 2023

We hold that replies on kamervragen provided on March 31 2023 (deplorably) wrongly suggest that in Buijs 2023 [22] assertions were made which might or even should be considered disrespectful towards individual students.

The usage of gender in the context of NB gender was conceptual on one occurrence and abstract categorizing on another occurrence. The usage made was certainly not personally categorizing and not even quasi-personally categorizing.

It must be stressed that Buijs used gender (and NB gender for that reason) as a word / term / phrase in a context of the sociology (more precisely interdisciplinary social science) of gender while clearly referring to the scientific use of that term.

Students of interdisciplinary social science at the University of Amsterdam should refrain from interpreting conceptual use or abstract categorizing use of gender (of NB gender) directly as personally categorizing (and thereby potentially offensive) use about their own person. Of course students may disagree with assertions made by a teacher in terms of conceptual use of gender. Doing so is a matter of scholarly debate which may and should occur on an academic campus.

It is implausible and in fact incorrect of students to ask for a safe space where they are shielded off conceptual use of the term gender which might be considered offensive when read in terms of personally categorizing use.

3.2.3 Conceptual usage of ‘integration’

As a further illustration of modes of use we mention Bracke & Hernández Aguilar 2022 [20] where a quite negative assessment is given regarding the pursuance of integration in Western Europe of Muslim communities. One of us (JAB) has a weekly activity focused on the integration in The Netherlands of the children of a Muslim family. Now the latter personal usage of ‘integration’ only seemingly falls prey to the surprisingly negative assessment of integration (of Muslims) given in [20] because in that paper integration is used in a conceptual mode, which for that reason is not apt for application to a single person in a specific context.

Integration gives some clue of the possible gap between conceptual use and personal use. When used in conceptual mode integration may for instance stand for the totality of intended and unintended consequences of activities meant for integration (of Muslim communities). And the authors of [20] may have their reasons for expecting that the totality of such consequences will create significant problems for Muslim communities. One may compare integration with the use of fossil fuels. In each particular case there is nothing wrong with such use, but unfortunately taking all unproblematic uses together nevertheless creates a big problem.

3.2.4 Usage of “gender” in AGT: quasi-personally categorizing

In comparison to FGT, AGT has little focus on conceptual analysis and conceptual usage of gender is less prominent in AGT for that reason. AGT not having a strong focus on empirical methods and statistical information abstract categorizing usage of the term gender is less prominent too, so we are left with personally categorizing usage and quasi-personally categorizing usage as the prominent usage of the term gender in AGT.

We assume that by default (i.e. unless stated otherwise) each use of the term gender in AGT is quasi-personally categorising.

Claim 3.1. *AGT uses gender as a fuzzy version of biological sex (b-sex in the terminology of [13]). For AGT b-sex is not a key concept, a fuzzy form of it (i.e. gender) suffices. AGT is not informed by FGT. AGT does not provide its own definition of gender, and does not aspire to do so either.*

So we may say that AGT uses gender understood as: a fuzzy notion modeled on b-sex though without any commitment to a specific notion of b-sex. Moreover in the rest of the paper the use of gender will be in quasi-personally categorizing mode.

3.3 Pseudo-science: used as a qualification for an instance of the gender non-critical position

By stating in [22] that the notion of a neutral gender is not well-founded (i.e. nonbinary gender, now using the terminology of [13]), Buijs [22] makes a claim which can only be defended on the basis of a conception of what pseudo-science might be. Philosophy of science has been struggling with that issue for ages. In Wikipedia the use of the phrase pseudo-science is dated back to François Magendie in 1843 in French and soon thereafter its English translation was used as well.

We will assume that in some cases the b-neutral status is assigned at birth whence a person has status ANAB (ANAB: assigned neutral at birth in the terminology of [13]). Cis-neutral persons have remained b-neutral during (until the moment at which an assessment is made of their gender). The existence or status of cis-neutral persons is not at issue for Buijs when claiming that the concept of a neutral gender is a matter of pseudo-science. Buijs claim can be read as follows:

Claim 3.2. *By adopting the strong primacy of self-identification hypothesis (PSIH, see Definition 2.4 above) as a philosophical axiom, rather than as the result of an incremental build up of evidence based knowledge, the resulting gender non-critical position is pseudo-scientific.*

We will indicate with “PSIH gender non-critical position” the version of the gender non-critical position which comes about from (is based on) adopting the strong primacy of self-identification hypothesis as an axiom of philosophical ethics.

In Buijs 2023 [22] NB gender should be understood as neutral gender according to the PSIH gender non-critical position, and it is the PSIH gender non-critical position of which Buijs claims that it is pseudo-scientific.

It may be granted that pseudo-science is perhaps not the best expression for the situation at hand, an alternative would have been the term proto-science which has also been coined by Thomas Kuhn as a label for science-like activity which is not quite science but which might on the long run evolve into science. However, when qualifying the PSIH gender non-critical position as pseudo-science rather than as proto-science that choice has been made deliberately.

As a justification for the qualification of the PSIH gender non-critical position based on the adoption of the strong primacy of self-identification hypothesis the following claims may be brought forward:

- The PSIH gender non-critical position has its roots in feminist theory, which, whatever its merits need not be accepted as a scientific position, being some form of ideology instead.
- The PSIH gender non-critical position is not based on any definition of the notion of gender, in other words if a person gender self-identifies by way of a lottery that is fine, and no mismatch with the principles of the PSIH gender non-critical position arises.
- Disagreement with the PSIH gender non-critical position leads to forms of disagreement that can hardly be distinguished from forms of disagreement between scientific positions and extreme religious positions (e.g. creationism), extreme medical positions (e.g.) as well as extreme political positions (far left or far right).
- There is no visible commitment of the protagonists of the PSIH gender non-critical position to advance their analysis of gender from a claimed status of admitted proto-science to a more advanced scientific level, because its foundation in philosophical ethics (however justified by various theories of human development and existence) are considered adequate as a matter of principle.
- This last point is crucial because philosophy certainly provides various methods of justification for seemingly contingent claims as the PSIH gender non-critical position. Consequentialism might be brought forward (it leads to the best of societies),

or some form of a precautionary principle (by not adopting the PSIH gender non-critical position some potential but non-quantifiable risk is left unmanaged). Adopting such approaches, however, would come with the (ideological) risk of having to accept a gender critical position, and precisely the latter ideological risk seems to be unacceptable (thereby leading to the gender criticality accusation as mentioned in [13]) as a matter of principle for proponents of the PSIH gender non-critical position.

3.4 Defining conflicts regarding the boundaries of academic freedom

We assume that it is consistent with the principles of academic freedom that an academic staff member who insists on teaching primary content which is known to be anti-scientific will be expelled from the academic staff. Here primary content contains the scientific message in positive terms. Secondary content would be wrapped as example or illustration and would thereby be insulated so that primary content is not isolated. So a staff member P may explain how the (anti-scientific) flat earth movement goes about when preaching its message of the flatness of earth without P being blamed of wrongful flat earthing.

For proto-scientific content the situation is of course more complicated, and there seem to be options for choice for all sides involved. Perhaps Carl Jung's analytical psychology might be understood as a proto-science, an approach still lacking a sufficient evidence base. It seems to be justifiable if a department of social sciences decides not to teach analytical psychology, and it is equally justifiable if a decision is taken the other way around. Students may enter a curriculum just because due attention is paid to a certain branch of proto-science, or they may choose not to enter the same curriculum for that very same reason.

The situation with pseudo-science, however, is much more complicated because it is plausible that different sides of the argument disagree about the validity of pseudo-science as a characterization of some specific intellectual activity. If all sides within an institution are convinced that a certain topic is pseudo-scientific then the topic will be ignored in that institution. Two forms of conflict may arise: staff member P investigates or teaches content which is understood as pseudo-scientific by others, or staff member P may qualify the teaching or research of others as being pseudo-scientific. In both cases a conflict between P and other participants may result. Both patterns may take place simultaneously as well.

It is with pseudo-science where battles for academic freedom may be quite sharp. In an important conflict at the University of Amsterdam one of us (LJB) takes the position that adopting the primacy of self-identification hypothesis for gender, in the specific case for neutral gender is based on pseudo-science. His opponents find this claim very problematic and some students (with some members self-identifying as gender neutral) have taken

drastic measures to remove LJB from their academic scene. This has become a battle for academic life and death (in or out in terms of staff membership for LJB) which is fought with quite sharp weapons (petitions, trigger warnings, complaints, twitter storms, attempts for cancellation and deplatforming).

At first sight one may claim that academic freedom must be guaranteed so that *P* can proceed without problems (live and let live). At second inspection one notices that the vicious battle which results from the student opposition (to LJB) and support (for the opposing students) by other staff members (as well as persons and groups from outside the University) by itself creates a situation which promotes creative thinking from both sides of the conflict, be it under quite stressful conditions. The paradoxical situation occurs that precisely by having a very sharp conflict some progress may be made. What can be concluded about the moral quality of various actions. We hold that gender theory is so important that having an academic gender war in The Netherlands is plausible if not unavoidable, and then having that war within the University of Amsterdam, rather than in another institution, is preferable from the perspective of the University of Amsterdam. From these considerations it follows that

(a) Given the societal importance of the core questions of gender theory, there is some justification for the drastic steps taken by the protesting students, and moral condemnation (which at first sight is plausible) may be limited.

(b) The battle is one about the boundaries of academic freedom in a specific case, not so much about the principle of academic freedom.

(c) It is legitimate that LJB defends his position with substantial action, and it is (because of the importance of the subject) plausible that other persons and groups support LJB in various ways.

(d) And last but not least, by magnifying the conflict to massive proportions the students, as well as the academic hierarchy supporting their methods (ranging from course management, via department leadership, the dean of the faculty, the board of the university, the rector of the university, and even the minister responsible for universities, himself a former professor at the same institution) collectively run the risk that underlying battle for primacy in the ideological debate is lost (a conflict where they may very well share important viewpoints with the protesting students), while a more low key approach (by not attacking LJB in such vehement ways) would have been trivially winning, even without anyone (outside a small group of insiders) taking notice that there was a disagreement at all.

(e) Obviously LJB, by adopting and expressing the positions he did, willingly and consciously took the risk of an academic battle that may be lost, in which case there would be negative consequences for his academic future in the academic institution at hand.

(f) For academic staff in other, less contentious, parts of the academic scene, the form

of these conflicts may be amazing, unreasonable, irrational, impossible to justify, or hard to swallow for other reasons. They may work in fields where it is not the case that viewpoints being academically taken for granted in The Netherlands (and supported by LJB just as well), may come with the risk of imprisonment (or even capital punishment) in many different parts of the world.

3.5 Promises and accusations

One of us (JAB see [12, 14, 15, 16]) has developed an interest in looking at issues from the perspective of promises and accusations. For instance our paper comes with the implicit (and now even explicit) promise of LJB to make a best effort to further develop AGT if the circumstances allow for such work. We read [21] and [28] as accusations in the direction of LJB that by writing [22] he has not written in compliance with perhaps implicit but nevertheless well-known rules of academic scholarly work, even to the limited extent to which such rules apply to a non-scholarly work in a magazine meant for a wide outreach of outsiders of a specific theme.

It goes without saying that by now deviations from the PSIH gender non-critical position (i.e. gender critical positions) may invoke unpleasant accusations ranging from homophobia (which would be utter nonsense in our particular case) to transphobia (an accusation which we would emphatically reject as being wholly unwarranted). In fact LJB has received on social media publicly visible accusations of homophobia and transphobia.

3.5.1 The “I am nonbinary” accusation

We formulate a new accusation: the “I am nonbinary accusation”. We assume that “binary” has been loaded with so much prejudice and negativity that proudly announcing yourself as binary has become problematic, if not for anybody than certainly for the infamous middle aged white males.

Claim 3.3. (I am nonbinary accusation) *By openly stating “I am nonbinary” and by asking/demanding others to use self-chosen pronouns in order to demonstrate that they “got the message” an agent P issues an accusation to all male and female persons in the audience with as a body the assertion that they are (whence self-identify as) “binary”.*

Following [13] we suggest that by stating “I am of neutral gender” or simply “I am neutral” instead of (“I am nonbinary”) there will be no implicit accusation implied. One may imagine that in certain settings some persons require a safe space where they are sure not to be confronted with one of the versions of the “I am nonbinary” accusation. The latter request must not be constructed as any form of opposition against the presence of persons of neutral gender.

3.6 Summary w.r.t. AGT

In addition to the items listed above in subsection 2.5 we mention the following aspects of AGT in relation to what has been written above.

1. The usage of the term gender in AGT will (by default) be either personally categorizing or quasi-personally categorizing.
2. Although gender critical in essence, AGT is unlikely to invoke sharp protest because of its focus on individuals and its non-interference with the design of gender categorization protocols.
3. We do not expect sharp conflicts regarding the boundaries of academic freedom when developing AGT. The highest risk lies in possible rejection by modern psychologists of elements imported from analytical psychology.
4. AGT is unlikely to give rise to any specific accusations.

4 AGT from scratch

After many pages of preparation we still confront many question concerning the scope, purpose and instrumentation of AGT.

4.1 Assuming a transition permissive concept of biological sex

We assume a notion of biological sex (b-sex) which comes about from medicine and biology and which informs the various brands of psychology: behavioural, psychoanalytical, analytical, humanistic, and transpersonal.

Unfortunately the notion of b-sex is not at all obvious and raises many questions itself. Ainsworth 2015 [1] argues that genetic criteria won't suffice for always making a reliable difference between male and female. But they draw a somewhat misleading conclusion: "In other words, if you want to know whether someone is male or female, it may be best just to ask." In case there is no definition of male or female that works for person P , asking does not help either of course, then the matter is just undecided. The missing step is to first introduce a reliable notion of gender on top of what can be said about biological sex and then to explain a gender categorization protocol, where, possibly but not necessarily (and if so only in specific cases), asking P about the outcome of self-identification plays a decisive role. In spite of the title [1] leaves sex undefined (at least in difficult cases). There is no indication that [1] proposes a transition permissive notion of b-sex. A recent

text on biological sex is Schnebly 2022 [55]. The problem we have with such texts is that the debate about gender and biological sex is explained, including its history, rather than the notions proper, leaving one puzzled about any commitment of Schnebly to actual meanings of these respective notions.

In Mason 2022 [46] all definitions of b-sex known to the author are surveyed to find for each particular definition that AHT (women are adult human females) fails, from which (without further justification) it is concluded that AHT fails in a more general sense. One is left with several question: (i) which definition of woman is used in [46] for the wide range of mentioned examples, (ii) does [46] conceive of a definition ‘female’?, (iii) [46] writes in strikingly pejorative terms (obstructing the transinclusive use of ‘woman’) about those who support AHT: would [46] be self-accusing if they had by accident found a definition of being female under which AHT true (for instance using the option sex assigned at birth is not even checked in [46]).

There seems to be a disagreement about whether or not a person can change their biological sex during their life-time. In FGT as discussed in [13] we work under the assumption that sexual transition exists and that transsexed people have indeed changed their biological sex. We may write that $FGT = FGT_{ts}$ where ts expresses the assumption that sexual transition can be practiced. One may develop an alternative formal gender theory named FGT_{nst} which is based on the assumption that sexual transition cannot take place. Philosophy and logic alone cannot decide whether or not sexual transition exists, the whole issue being a definitional matter about the concept of biological sex.

The literature on sex and gender is complicated by the fact that from say 1985 onwards there is a preference to speak of transition if gender rather than transition of sex while the underlying concept seems not to have changed. The ambiguity of these matters is exemplified in the title of [44]. Genzor et al. 2023 [34] suggest that a transition of sex can be made. For Ben-Asher 2006 [10] there is no doubt: sex is amenable to change via therapies. The focus of [10] is on significant differences regarding the rationale for reassignment therapies for intersex and transsex individuals. Such therapies, however, may change sex, in any case legal sex. It is claimed that just as gender is done by individuals, so is sex (i.e. b-sex). Perhaps it is meaningful to have l-sex (for legal sex) as a notion in between of b-sex and gender. We find that [10] reads sex change as legal sex change, for instance we quote: “Courts generally will not recognize a transgender person’s chosen sex or gender without the undergoing of sex change surgery, and preoperative transgender individuals are sometimes precluded from name change as well.” The later assertion (which by now may be rather outdated) avoids any use or mention of b-sex, working with l-sex instead.

Claim 4.1. *A transition permissive view on biological sex is more general than a transition non-permissive view of biological sex. A transition permissive view of biological sex can be turned into a transition non-permissive view of biological sex by stating that “actually”*

transitions of sex never occur (even if, in theory they might).

Claim 4.2. *As of early 2023 the majority view on the matter seems to be that (for humans unlike for fish) transition of b-sex does never take place and that the result of sexual re-assignment therapy is at best transition of l-sex, preferably cast as a transition of gender. (This view, however is inconsistent with gender being determined by self-identification.)*

Remarkably by denying the possibility of sexual transition it becomes simpler to design a convincing distinction between b-sex and gender because one may maintain the phenomenon of transgending while dismissing the notion of sexual transition. We will simplify the discussion by assuming that a detailed and transition permissive concept of biological sex lies at the basis of our reflections about gender both in FGT and in AGT. Said transition permissive concept of b-sex is supposed to be available at the professional side. It is assumed that the psychologist, analyst, psychoanalyst, or transpersonal therapist adopts said notion of b-sex.

To emphasize the fact that we make assumptions about the notion of b-sex at the professional side only we speak of a reference concept of b-sex. Clearly a patient, client, analysand or whatever named customer of the professional services may maintain their own concept of biological sex. Thus given a transition permissive reference concept of biological sex one may contemplate interactions with a variety of clients each of them maintaining their own private concept of biological sex. Having made this assumption, however, we first contemplate the idea of a behavioural approach to sex and gender talk.

4.2 Sex/gender hierarchy

There seem to be six notions around, three notions of sex and three notions of gender, listed below with increasing degree of flexibility. Thus, we find these options, where b-sex at birth is the most rigid (immutable) of these notions and so on.

1. b-sex at birth (can be male, female or b-neutral),
2. b-sex (biological sex, can be male, female or b-neutral),
3. l-sex (legal sex, can be male, female, or neutral),
4. l-gender (legal gender, can be male, female or neutral),
5. gender-c (gender categorization, can be male, female, neutral or \perp),
6. gender-i (gender identity, can be male, female, neutral or \perp).

Of these l-sex, l-gender, and gender-c are quite context dependent, b-sex is definition and assignment is primarily a matter of biological science, and gender-i is a personal matter. We hold that b-sex may change, that gender-i and gender-c must be distinguished, and that it is meaningful to distinguish l-sex and gender-c.

It would be useful if there was uniformity of meaning for these notions throughout the sex/gender debate, but that is far from the case. By distinguishing these notions one may on the long run develop a flexible and expressive version of gender theory with the quality that existing work can be faithfully translated into it, so that such translations can be compared. This idea resembles the projection semantics for program notations as used in [11].

We notice that according to [35] the very notion of gender identity can be profitably removed from the debate without risking to become a gender abolitionist, and without risking to keep track of a promising feminist political agenda.

4.3 Behavioural aspects of sex and gender talk

We will make the move towards various forms of psychology (analytical, humanistic) which may be combined with androgyny. First of all we have a brief look at aspects which may be clarified with more conventional methods of psychological research. Admittedly these considerations are merely casual remarks that do not cover the theme in any depth.

It will be important to determine what behavioural psychology has to say (and will have to say) about how people use the terminology of b-sex and gender.

1. How to determine which conception of b-sex a client holds? In particular the following questions should be clarified:

- Does a person accept the existence of ANAB (assigned neutral at birth) persons, and of cis-neutral persons.
- Does a person accept the existence of transsexed persons of various kinds: FTM, MTF, FTN, NTF, MTN, NTM. (Here it is understood that say an MTF transsexed person has b-sex female after transition.)
- Does a person accept that it is conceivable that an FTM male may give birth to a child?
- Does a person accept that it is conceivable that an MTF male may ‘father’ a child?
- Is a person aware of their b-sex?
- Is a person of the opinion that a mistake was made when assigning b-sex at birth (in their own case)?

- Is a person of the opinion that their current b-sex is correct (i.e. need not be changed on order to agree with the facts)?
 - Is a woman an adult female human? (Is a man an adult male human.)
 - Statistical information about various conceptions of sex as held by members of a population.
2. How to determine which conception of gender a client holds? In particular the following questions should be clarified:
 - Does a person believe that a gender differs from b-sex? (If so, how?)
 - Does a person accept the existence of gender neutral persons who are not ANAB?
 - Does a person accept the existence of transgendeerd persons of various kinds: FTM, MTF, FTN, NTF, MTN, NTM. (Here it is understood that say an MTF transgendered person has gender female after transition.)
 - Is a person aware of having been categorized as being of gender male, female, neutral?
 - Does a person agree with their current gender categorization?
 - Statistical information about various conceptions of gender as held by members of a population.
 3. Are there relevant correlations between replies to the above questions and occurrence of gender dysphoria of various kinds.
 4. Does a person believe in modularity (i.e. logical independence) of b-sex, gender on one hand and of sexual orientation on the other hand?
 5. All research into correlations between a client's personal gender theory (including b-sex theory) and other conditions that can be determined with psychological research.
 6. Are there conditions under which a person can profit (in terms of obtaining an improved psychological condition, or an improved likelihood of profiting from some kind of therapy) from instruction about b-sex theory/gender theory?
 7. Which forms of androgyny (if any) does a person accept (in general)?
 8. To which extent is the self-image of a person androgynous?

Probably there is little information available about psychological gender theory at this moment. Developing a significant body of knowledge on these matters will be important.

4.4 AGT in more detail

As stated above unlike formal gender theory (FGT), analytical gender theory does not focus on developing sharp boundaries between a discrete collection of gender labels. AGT takes little interest in the particular gender theory (including theory of biological sex) which a person adheres, although it is important to understand how a client will use various terms and phrases. the latter can be determined with methods of behavioural psychology. AGT allows two approaches:

(i) Using a discrete gender framework (2G, 3G, or 3G_⊥) where gender categorization of persons is adopted as given and as having been developed and/or constructed outside AGT, AGT may be applied, at the level of persons, to investigate the combinations of traits that persons of the same gender have in common. Person level AGT aims at answering questions like “what makes a person a woman?”, “what makes a person a man?”, and “what makes a person neutral gendered?”

(ii) Trait-level AGT where traits are considered as being (2G) gendered and even polarized (male traits may be signed, that is positive or negative, and so may female traits be) so that a person is understood as combining a family of traits thereby combining various (positive or negative) gendered traits. Trait level AGT may support the development of therapies aimed at making people happy with how they are, and aimed at preventing a potentially problematic quest for convincing categorization in one of the 2G (or 3G) genders.

Person level AGT may for instance appear in the following form: analytical psychology (for a 2G framework) may be used to characterize in positive terms what it is NOT to be male and to characterize in positive terms what it is NOT to be female. Then combining both positive characterizations may be used (as a hypothetical step in AGT) to provide a positive criterion for being of neutral gender. Nevertheless we will consider trait level AGT to be its most significant branch, and we will now expand on some details thereof.

4.4.1 Trait level AGT: fine grain essentialism

With formal gender theory (FGT) we denote approaches to gender theory where gender labels like male, female, and neutral denote disjoint classes of persons at any time. FGT is relevant for the design of passports, for entry conditions for bathroom facilities, for participation in sports, for issues about gender diversity in a work place, and to a lesser extent for matters having to do with intersectionality. (We refer to [45] for a detailed analysis of these matters.)

The key discovery of the gender non-critical position is that for formal gender theory (be it in a 2G framework or in a 3G framework) to become prominent it is immaterial whether or not one adopts any form of essentialism about gender. Even the most ardent

rejection of essentialism is compatible with the gender non-critical position (understood as a prominent position in formal gender theory).

It seems to be the case that the only form of gender essentialism that is still actively pursued nowadays takes gender at birth (AFAB, AMAB, ANAB) for the essence of the matter and assigns to a person a gender (i.e. b-sex) at birth without any perspective of transgenering. This position adopts natural gender (i.e. b-sex, and in this case b-sex at birth) as the definition of gender, and in addition rejects the existence of transsexed individuals.

At trait level, however, essentialism may be maintained and analytical gender theory may be understood as the (conceptual side of the) project of developing trait level essentialism (as a fine grain form of essentialism), without assuming that at the level of the personal aggregate the notion of gender still makes so much sense.

4.4.2 Analytic, formal, and societal: AGT, FGT, and SGT

AGT takes the various gender kinds (for the gender labels of FGT, depending on the framework chosen) for fuzzy classes of persons: membership is a matter of probability, or of degree, boundaries are not sharp. Different persons may judge differently about a person's gender, and gender categorization is primarily a linguistic tool. If and when gender categorization (say in a 3G framework) is needed, AGT is agnostic with regard to the gender categorization protocol of use (also referred to as the gender architecture in [13]).

For the time being FGT is an unavoidable component of gender theory. FGT is often codified in laws, so that a person's gender (i.e. the expected outcome of gender categorization) may differ from one jurisdiction to another jurisdiction, depending on the relevant laws in each jurisdiction. Although FGT is not in need of any justification as a meaningful or relevant subject, each of its various approaches are very much in need of justification and of philosophical (if not religious) foundation.

At this moment the role and status of analytical gender theory (theories) is unclear. The idea is to first establish what role AGT may play in analytical psychology. Admittedly mainstream psychology could not care less, but the difficulty of the starting position for AGTs must be recognized. Working towards a first class position of AGT in the style of Bem [8], with well-developed psychometrics, though now carried out with better and more modern methods is too much of a challenge for both authors in this phase of their respective working-life-cycles.

Besides FGT and AGT we will distinguish societal gender theory (SGT) which has an emphasis on the societal role of genders as collectives of individuals. Whatever finite gender framework one assumes, be it 2G, 3G, or 3G_⊥ (as specified in [13]) two forces must be balanced: private preferences concerning their own gender categorization of individual

citizens and politically motivated communal preferences. Understanding the plurality of the latter preferences is the topic of SGT. Remarkably SGT (under whatever name one wishes) plays almost no role in current gender theory. We believe that an explanation of that state of affairs can be found in the following stability phenomenon. This phenomenon seems to work in a continuous manner: the less important (say 3G) gender categorization becomes, the less incentives there are to object to the gender critical-position. The more important gender categorization (is or becomes) the more convincing are the ethical arguments in favour of the gender non-critical position.

Claim 4.3. (Stability phenomenon for the gender non-critical position) *The gender non-critical position has the following stable relation with societal gender theory: in a world where the current SGT (actual state of affairs describing) assigns modest to little relevance to the gender of a person, it is no problem for anyone if they freely choose their own gender, whereas alternatively in a world where the SGT at hand (describing the state of affairs in the alternative situation) indicates a high importance to differences of gender it is of high importance for a person to be able to decide upon their own gender.*

The above stability phenomenon suggests that opponents of the gender non-critical position must argue along two paths simultaneously: (i) to argue (on the basis of some SGT) that (say 3G) gender labels are of significant relevance for society at large, and (ii) to argue that given the relevance of gender differences, the price of adopting a gender non-critical position is too high, and cannot be justified on the mere basis of justice towards a small group of persons who might feel that they are or will be gender miscategorized.

Combining reasoning along paths (i) and (ii) is far beyond the scope of AGT. The proposition that AGT is to be viewed as (2G or 3G) gender agnostic seems to be quite safe.

4.4.3 Societal gender theory, further comments

The step from Bem to Butler (see [13] for a description of that step) may be understood as a swing of focus from AGT to SGT. SGT as perceived by Butler has a focus on: (i) gender roles as impacted by societal structures, (ii) societal structures as mechanisms which constrain the evolution of gender frameworks and corresponding gender roles, (iii) modification of gender frameworks and of gender roles as mechanisms for societal change.

To these considerations we add: macro-ameliorative design of gender frameworks and gender architectures. How to design gender frameworks and architectures in such a way that the well-being and functionality of society as a whole is best served?

A typical question for SGT is as follows: suppose one adopts the $3G_{\perp}$ gender framework and a gender categorization protocol which admits that some male person give birth

to children. Now suppose that transitional categorization dynamics works to the extent that say 40% of the persons who might give birth to children are categorized as male. Then one may ask: (i) must one expect under such circumstances that it will become problematic for the population to reproduce in a stable and predictable manner? (ii) Is it to be expected that there will be gender sub/cross-categories like “able to give birth to a child”, and “able to produce fertile semen”, (iii) Is it to be expected that strong societal forces will work towards lowering the percentage of persons able to give birth to a child who are not categorized as female (i.e. either as male or as neutral or not at all, that is as \perp)?

Another question is how a gender framework complemented with a gender architecture must be complemented with permissions (access rights) and preferential conventions per gender so that indeed gender categorization plays a useful societal role. SGT may take the form of an FGT informed extension of work like [24].

4.4.4 Lack of modularity

In the context of FGT it is common practice to modularize the theme of gender and sexuality by separating sexual orientation from gender, the latter being independent from the former. We assume that a similar modularization fails to apply in the case of androgyny: although traits are considered gendered independently of the sexual orientation of the person involved, sexual orientation including various expressions thereof is among the traits.

We notice that [23] yields a corresponding picture when contemplating the fin de siècle period in Germany, i.e. some 100 to 120 years ago with Magnus Hirschfeld as the key innovator. (We assume that [23] uses sexual identity for what we refer to as sexual orientation.)

4.5 Androgyny as a classical idea

A person is considered androgynous if they roughly feature as many female traits and properties as male traits and properties. Androgynous persons are in the middle of the scale of androgyny so to say. The androgynous condition is an informal and intuitive concept. Reliable psychometry helpful for detecting or validating androgyny seems not to exist. There are a range of androgynous conditions depending on how many 2G gendered traits and properties a person features.

Abraham Maslow has proposed that the androgynous condition may correlate with the capability of self-actualization. Some confirmation of this idea has been found, see e.g. [39]. It seems that the literature combining humanistic psychology with androgyny is more voluminous than what has been published about the combination of androgyny and analytical psychology. Remarkably (but consistent with Maslow’s ideas) these papers

have no medical motivation and have a primary focus on successful persons.

An endeavour related to analytical psychology is humanistic psychology which is indebted to Maslow and his notion of self-actualization (a process related to but distinguished from Jung's individuation). A comprehensive introduction to the link between self-actualization and androgyny is offered in [31]. See also [43] and [41].

4.6 Androgyny as a modern idea

We will now outline a theory of sexuality and gender which might come about from androgyny as the main underlying idea. We provide a sequence of claims.

Claim 4.4. (2G majority) *In terms of biological sex, at all times the b-neutral individuals constitute a small minority. The vast majority of persons has either b-sex male or b-sex female.*

Claim 4.5. (Androgynous distribution of personality traits) *All persons combine personality traits with female personality traits.*

(These persons are likely to transgender, or have transgendered to the opposite sex.)

Androgyny suggests a lightweight preservation of essentialism. It seems that essentialism has lost much ground, and that in the gender non-critical position it has lost too much ground. The idea that person level essentialism on matters of gender will return to prominence is unwarranted, while trait level essentialism is still promising.

Claim 4.6. (Gender conformity for b-sex majority) *Most males have a majority of male traits (or alternatively stated a dominant package of male traits; different alternative: are for most traits conforming with their gender). Most females have a majority of female traits (or alternatively stated a dominant package of female traits). At the same time most (if not all) males have some female traits, and most (if not all) females have some male traits.*

The phenomenon of transgenering to the opposite sex comes as no surprise. The following claim suggests that transgenering may take place, it does not explain the rationale for reassignment therapies.

Claim 4.7. (Gender non-conformity for b-sex minority) *Some males have a majority of female traits and some females have a majority of male traits.*

Only a part of the persons with a substantial flock of traits linked to the opposite sex seem to be inclined to transgenering, and many of them find an equilibrium in other

ways. The picture is more complicated, however, because the bundle of traits exposed by a person may be relation specific so that a person may show different such bundles in different directions.

Traits may be distinguished in psychological traits and physical traits (bodily), including endocrynical traits. Having made that distinction one may make sense of reassignment therapies from a perspective of androgyny.

Claim 4.8. (2G transsexuality originated MTF transgenderism) *Some males experience dominant female psychological traits, while lacking dominance of physical female traits. For these persons the ‘idea of being female’ nevertheless makes so much sense that they are happy to try to adapt their bodies and their endocrynical system in such a manner as to have their psychology and physiology in better harmony. AGT provides no sharp boundaries on when to consider such persons being transgendered.*

Claim 4.9. (2G transsexuality originated FTM transgenderism) *Some females experience dominant male psychological traits, while lacking dominance of physical male traits. For these persons the ‘idea of being male’ nevertheless makes so much sense that they are happy to try to adapt their bodies and their endocrynical system in such a manner as to have their psychology and physiology in better harmony. AGT provides no sharp boundaries on when to consider such persons being transgendered.*

These claims come with a departure from FGT as follows: the modularization by which sexual orientation is decoupled from gender can hardly be maintained. Indeed sexual attraction to females is a majority trait for the majority of males and sexual attraction to males is a majority trait for the majority of females. Unavoidably (statistically) sexual orientation becomes one of the determinants of gender. However, we notice that Dembroff 2019 [26] provides a new theory, with improved and unbiased terminology, for sexual orientation which takes b-sex and gender as a parameter and which assumes continuous scales based on androgyny.

Claim 4.10. (3D fusion/interaction concept of gender) *Gender for a person has three sources (dimensions): b-sex, social construction, and personal development. For each person their gender results from a fusion/interaction between these three sources.*

Claim 4.11. (Role of analytical psychology) *The key role of analytical psychology (in working towards evidence for the above claims) is to support the discovery and classification of gendered mental traits.*

Claim 4.12. (Relational turn in sociology) *AGT can only successfully contribute to gender theory if it adopts the relational turn in sociology. Gender (for P) is created through interactions with the Other. At the same time, however, b-sex and p-sex are the immutable point of departure for P’s behaviour.*

4.6.1 Outcomes of a preliminary literature scan

We have made a preliminary scan of the literature on androgyny and analytical psychology in order to find out to what extent the above claims can be provided with evidence from existing sources. Our preliminary impression is that such evidence is hard to obtain. Rather than to dismiss the project of working in the direction of the above series of claims we formulate some hypotheses regarding why the literature seems not to provide what we were hoping for.

1. Many works on androgyny contemplate the significant step from androgyny as a mythical notion to androgyny as a tool for modern psychology, and at best take moderate steps towards evidence based validations of aspects of androgyny. The challenge we have in mind, however, amounts to taking androgyny on board for a much larger enterprise.
2. The idea (as suggested above) that androgyny might be used to some form of revitalisation of essentialism might be new. Doubts about essentialism are recent and most work on androgyny is written on the basis of the assumption that masculinity and femininity constitute undisputed facts of life.
3. The idea that androgyny would be used to provide new foundations for today's gender theory is new, in any case it is foreign to the vast amount of work on androgyny before 2000.
4. The significant influence of Maslow shows positive sides of androgyny but is at the same time rather unhelpful for explaining problematic aspects of the androgynical spectrum. These problematic aspects, however, and the need to deal with these in a responsible manner, lie at the roots of today's gender theory.
5. For analytical psychology one may say the following: this theory dates from times where sexes were undisputed, and for that reason has not been used for the question how sexes can be explained (or even engineered). Analytical psychology seems to have a bias towards clinical practice, while when looking for new foundations for a theory of sex and gender, one needs to work at a higher level of abstraction, thinking in terms of categories rather than in terms of individuals etc.

We feel that when working towards AGT an important step is to provide a philosophical account of what Jung and analytical psychology as it has been developed have to say about gendered traits of personalities. Developing such a philosophical account lies outside the scope of this paper, however. We will make some brief remarks concerning philosophical aspects and options nevertheless.

4.6.2 Philosophical speculation

The claims mentioned above may (or may not) acquire growing recognition. If that happens our Western society will develop into the direction of matriarchy in contrast with the patriarchy which has been leading for over 12.000 years (see [2]). Another aspect is to consider the physics based metaphor that psychologically gendered traits, more so than the physical gendered traits, may feature quantum superposition. Male and female behaviour then is linked to a probability distribution. When contemplating gender categorization self-identification must be balanced with b-sex and observed socialization. The one extreme is gender non-critical thinking: self-identification acquires the exclusive right on gender categorization. When working with b-sex at birth (as the definition of b-sex) and denying any notion of gender except natural gender (i.e. gender = b-sex) then the other extreme is obtained. Bruno Latour has analyzed the coexistence of humans and external nature as representing two extremes the which cannot exist without one-another and must for that reason somehow compromise. A similar compromise will be needed between the two extreme views on gender categorization.

4.6.3 If androgyny is the solution, then what is the problem?

We assume that for various reasons the term gender has become prominent next to and partly as a replacement of b-sex. Such changes are not uncommon and provide flexibility for various purposes, and in ways that may change in time. Computer program has become computer software, the boss has become a member of the management team, (in Dutch/in The Netherlands) a ‘flat’ has become an ‘appartement’ (an ‘appartement’ need not be flat anymore), and indeed one’s sex has somehow become one’s gender.

In the second half of the 20th century gender became a concept which was seen as predominantly determined by social construction. (If you want to be a good woman, so please take your time to read “Good Housekeeping” and then some years later: if you are reading “Good Housekeeping” you are a woman.) In the last 25 years, however, a movement in the opposite direction has emerged which by now seems to be dominating the field of gender studies: gender is (or should be) determined by a person’s private identity, and the battle to obtain the right to determine one’s gender without external interference is seen (by some, not by all) as a major arena of emancipation, an emancipation with a feminist background but which is gradually becoming all-inclusive for the three genders. The wave towards personalization of gender identity leads to quite extreme viewpoints, which by themselves create remarkable societal tensions, some of which have been highlighted in our paper on FGT as well as in earlier chapters of our paper.

The problem to be solved is to find a workable mix of the three major inputs to (forces acting on?) the notion of gender: biological sex, social construction, and private personal

identity. We propose that androgyny instrumented with analytical psychology can be of significant help for resolving this problem. By finding a balance between the impact on gender of b-sex, social construction, and individualized identity, we would also hope to bring gender theory into less controversial territory, a move we think is becoming more important by the day.

4.6.4 Psychological sex (p-sex)

With p-sex we denote b-sex correlated psychological attributes. Access to p-sex can be obtained from different sides: (i) androgyny allows to think in terms of gendered traits, (ii) analytical psychology has a somewhat stereotypical 2G perspective in p-sex, a perspective which we expect can be made up to date and which will then exploit Jung's proposals for conscious and unconscious psychological structures, (iii) conventional psychological/biological research, e.g. Schmitt e.a. [53] and Archer [3].

Archer [3] may be seen as a step beyond the work of Bem: more biology, less informal psychology. Although Archer does not cite Bem, we see a contrast which also indicates a direction. Thinking in terms of b-sex does not exclude a sharp focus on p-sex, and by combining the tradition of androgyny as represented by Bem and psychobiology as represented by Archer, in an analytical framework taking into account some essential intuitions of Jung making progress may be possible.

4.6.5 A gender triangular position, versus three gender mono-angular positions

Rephrasing the above we propose to work towards a gender triangular view: gender is positioned in the inside of a triangle with edges: b-sex/p-sex, social construction, and private identity. A triangular view on gender is necessarily gender critical, because a gender non-critical view will deny any influences on gender categorization other than private identity. The gender non-critical view may also be viewed as one of the three possible mono-angular gender views. Equating gender with b-sex is a mono-angular view, making gender for 100% social construction, viewing self-identification as the only input for gender categorization is a gender monoangular view as well.

4.6.6 AGT as a perspective for analytical psychology

A long term perspective might be to uncouple various form of gender dysphoria from belonging to one of a very limited number of gender kinds and from the idea that belonging to another gender would solve problems. Analytical psychology informed by AGT will primarily take a person as is, in spite of their classification difficulties in a spectrum of three (male, female, neutral) or four (also including the peripheral gender label \perp) genders.

AGT provide contrasts between male and female, and within these categories between positive and negative. These contrasts are thought as means for classification. Analytical psychology fleshes out the contrast between self and other (animus and anima), where importantly both poles are constituents of a structure theory, as both poles are supposed to have a simultaneous existence within a single person.

Analytical psychology may help analysands to make progress in terms of feeling comfortable with themselves in such a manner that the need for reassessment therapies is minimized.

4.7 Humanoid robots: a gendered species of human-like agents

Humans may be understood as a species of human-like agents and so may be humanoid robots. With humanoid robots becoming practical, a second species of human-like agents arises on earth. Robots may be gendered just as humans. Robots which might be gendered among humans are discussed in [32]. There is an extensive literature on gendering robots, see e.g. [49]. There is also an area between humans and robots, see e.g. [29].

Robot gendering is very much like AGT, as gendered robots are characterized by aggregates of gendered traits. One may imagine a robot to gender self-identify as male, female or neutral.

5 Concluding remarks

5.1 Androgyny, additional information

Androgyny provides a different approach to gender categorization, in particular by providing different categories, not focusing on a discrete framework like 2G, 3G, or $3G_{\perp}$. For the mythical origins of the concept of androgyny we refer to [38]. For historical remarks on androgyny including a description of its role in a modern gender debate we mention [6].

McCormack [47] provides a highly informative survey of debates about androgyny some 40 years ago, paying due attention to Jung's perspective on androgyny. We notice that [47] is optimistic about the perspective of androgyny, we quote: "Indeed, androgyny is to psychology what modernization is to sociology." Bazin 1974 [7] provides an early bibliography of androgyny, understood as a theme in (then) modern psychology.

For a detailed picture of androgyny we refer to Bem (1974) [8], and Singer (1977) [54]. For recent work on androgyny we mention [25] providing a survey of the impact of the work of Sandra Bem, [30] on advertising which adopts the spectrum of gender identities as proposed in [8], and [4] where androgyny seems to be used as a synonym of non-binary gender expression, again against the background of the spectrum of [8].

In [48] a survey of different interpretations of androgyny is given which demonstrates that the notion is highly ambiguous so that each use of it must be qualified and restricted in order to prevent confusion.

Androgyny has advantages and disadvantages in comparison to mainstream gender theory. As advantages we mention: (i) a rich scheme of gender characterizations, (ii) intrinsic descriptions of the various gender characterizations, (iii) well-developed connections with analytical psychology, (iv) an apolitical individualistic approach, and (v) marked distance to b-sex.

Androgyny provides a link between contemporal thought on gender diversity and the classical mythical and religious heritages of disparate cultures and continents (see e.g. [57]).

Androgyny has a formidable presence in the psychological literature, though more so in social psychology than in clinical psychology. A remarkably comprehensive introduction to androgyny can be found in [60], where psychological androgyny is introduced as a consequence of Derrida' style deconstruction of the sexual binary. In this work spiritual androgyny is center stage, however.

Approaching gender issues along the lines of androgyny might be termed gender-‘featherlite’ following the style of terminology of [19] as used e.g. in [18].

5.1.1 Sandra Bem

A prime pioneer in androgynical studies has been Sandra Bem (1945-2014). Bem has been constructing the first metrics having to do with combined male and female features. The famous BSRI (Bem sex role inventory) allows measurement of a degree androgyny. An old application of the BSRI is found in [50], an MSc thesis providing a useful historical survey of the subject at the time, together with somehow surprising research that where androgynous peak performance is found, such performance is closer to male performance than to female performance. A recent application of the BSRI can be found in [37] where for the special case of academic staff the original conclusion of Bem that androgyny is an advantageous state of personality is reproduced.

Bem [9] indicated that Bem was somehow dissatisfied with the progress made via androgyny with and gave in to emancipatory strategies with a disruptive bias such as promoted by Judit Butler. According to [59] Bem made no distinction between sex (i.e. b-sex) and gender, a distinction which Butler definitely made. According to [59] Bem considered her neglect of a distinction between b-sex and gender to constitute an omission in her own work in hindsight.

5.1.2 June Singer

Singer [54] has first combined analytic psychology with androgyny (for a follow-up and a step towards revision see [42] and for a gendered redesign of Jung's A/A theory see [40]), however, as [58] points out androgyny is nowadays a term which seems to lack sufficient focus and for that reason may not be used very often.

5.2 Analytical psychology

Analytical psychology has grown out of Carl Jung's confrontation with and partial departure from Freud's approach to psychoanalysis. A survey on Jung's view on sexuality is presented in [52]. AGT intersects with analytical psychology. AGT informs analytical psychology about states of mind and mental developments that have been overlooked or neglected by the founders of analytical psychology. Psychotherapy is said to feature a similar gap [36].

5.3 Future work

This paper provides a fairly preliminary outline of AGT as an approach to gender theory. The literature about androgyny is very extensive, quite incoherent, and failing to show a clear focus or direction. The same holds for analytical psychology. Unlike with FGT there seems to be no current debate on core topics of androgyny which may be helpful for defining a state of the art in the field.

Although we consider it to be plausible that AGT provides a promising approach to gender theory, it remains to be seen to what extent combining the relevant aspects of the literature on androgyny, sexual aspects of analytical psychology, and androgyny such as it occurs in humanistic psychology will provide a meaningful perspective on matters of gender from which, for instance novel perspectives on transneutral (i.e. neutral while non-cis-neutral) gender categorization can be drawn.

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