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# Logic as Liberation, or, Logic, Feminism, and Being a Feminist in Logic

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**Abstract:** There has been a long history of tension between feminists and feminist philosophy, on the one hand, and logic, on the other hand. This tension expresses itself in many ways, including claims that logic is a tool of the patriarchy, that logic/rationality/analytical tools in philosophy need to be rejected if women are to fully participate, that women = body and man = mind, that to do feminist philosophy one must do it as a situated, embodied person, not as an impersonal, disembodied mind, that logic is “a masculine subject”. However the tension is expressed, it is women in logic and women logicians who are caught in between. The goal of my paper is to explore a conception of logic that not only is not inconsistent with being a feminist, but is actively welcoming of women as logicians.

**Keywords:** feminist logic, feminist philosophy, Andrea Nye, Val Plumwood

## 1 Introduction

There has been a long history of tension between feminists and feminist philosophy, on the one hand, and logic, on the other hand. This tension

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expresses itself in many ways, including claims that logic is a tool of the patriarchy, that logic/rationality/analytical tools in philosophy need to be rejected if women are to fully participate in the field, that logic is “a masculine subject” (Nye, 1990, p. 2), that “women = body” and “man = mind,” that women have “brought the body into philosophy,” that to do feminist philosophy one must do it as a situated, embodied person, not as an impersonal, disembodied mind.<sup>2</sup> Logic is furthermore too often used as a tool of oppression, a means to challenge, disenfranchise, and demean women (and others!) as too emotional, too irrational.

The anti-feminist conception of logic outlined above is espoused by people like Andrea Nye, especially in her book *Words of Power* (Nye, 1990). This conception is rooted in binaries: logical vs. non-logical, male vs. female, man vs. woman, logician vs. feminist. We will show that to follow Nye, and agree that logic is the purview of men, and not of women, is to buy into a problematic story.

Val Plumwood has challenged this approach by highlighting problems that arise from viewing the world through these dualisms, which are “a particular way of dividing the world which results from a certain kind of denied dependency on a subordinated other” (Plumwood, 1993, p. 443). Because of the dominating nature of these dualisms, it is the incorporation of dualisms into logic that is problematic for using logic to achieve feminist aims, Plumwood argues, not logic itself. The focus of her concern is the dualistic nature of classical logic, which divides the world into “true” and “not true”. As an alternative, she argues for the incorporation of relevant negation (Plumwood, 1993, p. 458), which does not have the same hierarchical, homogenizing effect that classical negation has.

Plumwood’s article provides us with a model for how we can begin to understand logic in a non-anti-feminist way. But Plumwood herself does not challenge the broader societal binaries that are still attached to logic in problematic ways that impact on the recruitment and retention of women in logic. This makes challenging the gender binary of man vs. woman, with the dependent binaries of logical vs. emotional and mind vs. body, an integral step of making logic an inclusive place for not only women, but also everyone who falls outside of the gender binary. Instead of merely rejecting the problematic identification of man = logic and woman = emotion, we

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<sup>2</sup>I’m not claiming that *all* feminists adopt these views; but each of these sentiments are ones that I have had expressed to my face from people who claim to be feminists or to support women in logic and/or philosophy.

## Logic as Liberation

should be rejecting the binary between man and woman altogether; without this binary, all binaries dependent on it fall apart.

However the tension is expressed, it is women in logic and women logicians who are caught in between. The goal of this paper is to explore a conception of logic which is not only consistent with being a feminist, but is actively welcoming of women as logicians. The aim will be to justify a position where logic is no longer a tool of oppression and domination but is instead a tool of liberation.

The paper is both theoretical and autobiographical. This is because we cannot judge the impact on lived experiences of how society approaches and conceives of topics such as gender and rationality without examples of these experiences. While I do not wish to claim that my experiences are universally generalizable, I share them because I know that aspects of them will resonate with readers in different ways, whether because they have had similar experiences or whether because they have witnessed people having similar experiences.

In the next section, I address the important question of *why does this matter?* Where do these concerns come from? Who cares whether logic is a tool of oppression or a tool of liberation? In sections 3 and 4, I look at two historical accounts of the relationship between logic and women, both of which illustrate the ways in which logic has, historically, been set up as a tool to repress or exclude women—a phenomenon which is the focus of section 5. In section 6, I offer a positive account, of how logic can be used as a tool of liberation rather than exclusion.

## 2 Why does this matter?

In late January 2023, my labor union (the University and College Union) announced 18 strike days across February and March. The impact of this industrial action was that my introductory logic class went from having eight lectures left to having *three* (on top of having already lost one lecture the previous term due to strikes). Of these three lectures, one was the day after the announcement, with a topic that couldn't be changed at such short notice.

It was heartbreaking.

There was no way that I could teach all the topics I normally teach with the loss of five lectures. I had to answer a crucial question: If I only had two weeks left, what is it that I wanted my students to learn? Ordinarily, these eight lectures would have involved finishing up the meta-theory of

propositional logic, segueing into predicate logic semantics and proof theory (and a brief discussion of meta-theory), and then we'd wrap up the year by shifting gears entirely to look at Buddhist logic.

I decided that if I had to lose a large chunk of material, it was predicate logic that had to go, in favor of keeping as much of my usual two lectures on Buddhist logic as I could. But this raised another question: How would I explain this to my students? Not just that the Buddhist logic material is important, but that it was *more important* that they learn about it than that they learn predicate logic. And how could I explain to them, too, why this was even an issue—why, despite the fact that there is literally nothing that I enjoy doing more than teach intro logic to enthusiastic students, I would be participating in industrial action, even with the disastrous effect it would have on my favorite activity. If I wanted to give one lecture on Buddhist logic, then this meant I had *one* lecture to get them to understand why any of this mattered.

So when my lecture came around the next week, instead of talking about the language of predicate logic, I told my students we were going to talk about why we were doing this: Why are we even in this class? We covered possible answers all the way from “so that you can achieve the subject-specific learning outcomes listed in the module description as published in the faculty handbook” to “I hope you learn what logic is and what logicians do” to “how to follow rules/directions and reason from a definition” and then we had a collective discussion on the bigger questions:

- Who is logic for? Who gets to be or count as a logician? Who is excluded?
- What are ways in which “logic” or “reason” or “rationality” (especially claims of “being reasonable” or “being rational”) weaponized in modern Western society? Who does this weapon tend to be used against?
- If we are currently living in a society that is under the “rule of reason”, what would an alternative to this rule look like? Could reason/rationality/logic still play a role?

I had never explicitly discussed these questions with students before, and underestimated the impact they would have. Most of the students were in the class because they were interested in logic, rather than because they are interested in wider social issues, but *all* of them, that day, recognized that our

study and use of logic doesn't exist in a vacuum, and that these questions, far from being irrelevant wokery, should be central to both the study and the practice of logic.

One of the main purposes of this paper is to illustrate *why*.

### 3 Women and logic

#### 3.1

I went into my first logic class convinced I was going to fail.

I was still in high school, and had signed up to do a class at the local community college. Why logic? Because I'd lived all my life knowing, fundamentally, to my core, that I was not a logical person—and that my father was. I wanted to know more about how he thought, how he worked, and this was the perfect opportunity to do so, because the grades I got wouldn't count towards anything. It wouldn't matter when I failed.

And then, I didn't. About a third of the way through the semester I realized I was the only one who understood any of what was going on; and by the end of the semester, I had tutored all but one of the other students. Not only was I *not* fundamentally illogical, I was actually rather good at it!

By the time I graduated university, I had taken all of the logic classes offered in both the philosophy and the mathematics departments (including one that I took twice!). Logic was everything that English literature (my first major) and philosophy (my second major) were not: There were rules. Things were right or wrong. Either you had a proof or you didn't. Questions could actually be answered; and the task of figuring out the right new questions to ask was enormously challenging and satisfying. Beyond this, logic also gave me the tools I needed to structure my world into something I understood. It gave me tools for navigating social situations, to make decisions about my future in the face of uncertainty, and to be a better parent. It has also given me the opportunity to share the sheer joy of it with others.

#### 3.2

In 1913, American author, historian, and Unitarian minister Edward E. Hale published an article in *The North American Review* entitled “Women and Logic.”<sup>3</sup> It opens:

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<sup>3</sup>For quite some time—but thankfully no longer—this article was Google's top hit when searching for “women in logic.”

That women are not logical is one of the recognized conventions of social life (Hale, 1913, p. 206).

In his article, Hale is interested in two questions: (1) Where this convention comes from/what underpins it, and (2) What, exactly, is meant by the convention.

To the first question, Hale says he only knows of one explicit discussion of the convention, in Otto Weininger's *Sex and Character*, which he attempts to summarize. In brief: A necessary part of the logical faculty is memory—in order to be able to carry out logical operations, one must remember what you have started with, and what steps one has done along the way, so that the  $A$  that you start with is the  $A$  that you end up with. Memory is also required in order for any sort of generalization across time to be made: One has to be able to remember the instances yesterday in order to recognize that they are the same as instances today, and thus that these instances might be instances of some more general law. “Only so can we understand the fundamental proposition of Logic,  $A = A$ ”, Hale (1913, p. 206) says. But, according to Weininger, “the absolute woman has no memory” (Hale, 1913, p. 206). So she lacks one of the necessary components of the logic faculty.

Hale notes that Weininger's position can be objected to by either rejecting the claim that memory is necessary for logic, or the claim that women do not partake in memory; he prefers to avoid both of these questions and instead “examine the general proposition directly; make a frontal attack, as one might say” (Hale, 1913, p. 207). This leads him to the second question, namely, what does it mean to say that women are not logical? The answer to this, says, depends on what we mean by “logic” (Hale, 1913, p. 212). He identifies four possibilities:

1. the logic of the schools
2. the logic of argument
3. the logic of consistency
4. the consistency between theory and practice

These are not the only possibilities, but he notes that he sets aside from consideration many interpretations of “logical” on which not only are women not logical, but men are not either.

Even under the four possibilities that he focuses on, Hale admits that women do not have the monopoly on being illogical. By the “logic of the

## Logic as Liberation

schools”, Hale means the formal study of logic, via the reading of textbooks and the discussion of arguments in semi-formal representation. In this “scholastic sense,” “most men are not logical. . . they have no idea even of what logic is” (Hale, 1913, p. 207), because they have never been exposed to the formal mechanisms of logic. Nevertheless, they are still able to spot fallacies and reason according to logical principles; but this—Hale admits—is something that women are able to do to: “Women are just like men in this respect” (Hale, 1913, p. 208).

The next alternative Hale considers is the logic of argument, that is, the practical application of correct reasoning, whether based on the logic of the school textbooks or on commonsense principles; to say then that men are logical (and women are not?) is to say that they are “particularly argumentative” (Hale, 1913, p. 210). But he notes this account of “logical” occupies only a small portion of our every day use of the term. Instead, quite often, “logical” is used in a non-argumentative way, to mean that there is “a sense of consistency of coherence, [. . .] a feeling of what is necessary, of how a matter ought to turn out, of what is proper” (Hale, 1913, p. 210). Logic, then, is “a matter of demonstration and of proof” (Hale, 1913, p. 211), resulting in conviction. If we take “logical” in either of these, every day, senses, then women *are* illogical, in the sense that “when they try to prove anything they come out at an illogical result or they get at their result by illogical methods” (Hale, 1913, p. 211) because they “argue not by making inferences or deductions, but determine their result by intuition or by some other method known to themselves” (Hale, 1913, p. 211).

This brings Hale to the point of being forced to grudgingly concede that maybe women do have some little bit of logic, perhaps, if we construe logic in the right way, if it means “consistency [. . .] with whatever plan, good or bad, happens to be under discussion” (Hale, 1913, pp. 216–217) or “a sort of consistency or coherency, a full development or a natural outcome or something of the sort” (Hale, 1913, p. 211)—if we do this, “then we shall often find that these intuitions of women are often logical enough” (Hale, 1913, p. 211) (even if this has “nothing to do with logic considered as argument” (Hale, 1913, p. 211)).

A munificent conclusion! Maybe 16-year-old me would’ve been reassured, in advance of taking my first logic class, that when I questioned whether I could be logical, I could reassure myself that as a woman, I did have some “logic”!

But the real question is not “whether women can be logical” but *how this is even a question at all??*

## 4 Woman *or* logic?

### 4.1

There is something shocking, to the 21st-century reader, in the opening lines of Hales' paper, a visceral gut-punch of *how can this even be a question?* Surely, by now, we might hope, more than a century after Hale was writing, *things have gotten better*, that we can take it for granted that being a woman and being logical are not incompatible.

We might hope, and our hopes will be dashed.

I left my initial PhD programme, in philosophy, because I wanted to do logic but was told that logic was “not philosophical enough.” Since then, I have had an uneasy relationship with being labeled a philosopher. In 2016, I had the pleasure of going to Australia for a string of back to back conferences—the Australasian Association for Logic; the Australasian Association for Philosophy; and the International Association for Women Philosophers. This series of conferences really drove home to me how this reluctance to include logic within the purview of philosophy goes both ways.

I went from feeling included and welcome and within my element, at the AAL, to feeling ostracized and unwanted, at the IAPh. The clincher event was a roundtable on Women and Philosophy, where the idea that one could be a woman, in philosophy, who was interested in logic and used logical tools was an anathema. I came away from this roundtable with a profound feeling that if this is what ‘Women and Philosophy’ is, then the only logical conclusion is that either I am not a woman (or the right kind of woman) or what I do is not philosophy (or not the right kind of philosophy).

### 4.2

Fastforward almost 80 years from Hale: Far from us having reached the enlightened position where no one even questions whether women can be logical, we find ourselves in a position where people—with explicitly feminist leanings!—reject the suitability of logic for women entirely:

Logic... is not a feminine subject... logic is, after all, a masculine subject (Nye, 1990, p. 2))

Additionally, according to Nye (1990, p. 5), “logic articulates oppressive thought-structures that channel human behavior into restrictive gender roles.” This position goes a step beyond creating a concept of “women’s logic” as Hale does and simply denies that women can have any logic at all. Nye



## Logic as Liberation

excludes *a priori* any possibility of being both a woman (or a feminist!) and a logician. This is because “logic is the creation of defensive male subjects who have lost touch with their lived experience” (Nye, 1990, p. 4) and “an invention of men, that is something men do and say” (Nye, 1990, p. 5). The exclusion is affirmed again at the end of the book, when she consider the case where “a feminist reader is to remain reader *and not turn logician at the last moment*” (Nye, 1990, p. 175, emphasis added) (never pausing to wonder if one could be both reader and logician at the same time).

As a logician, it is hard to read a critique such as Nye’s because I want to *also* be able to be a feminist. If Nye is right, no woman can be both a feminist and a logician together, because the two are antithetical to each other. If she is right, then if I wish to be both feminist and logician, then—because I am a logician and can do modus tollens—I must conclude that I cannot be a woman.

Or, we can find ways to resist Nye’s dogmatic conclusions.

Nye’s arguments are rooted in her own experiences, as the introduction to her book makes clear. She is at pains to be explicit about how her reading of the history of logic is influenced by her position as “a woman reading logic” and “a philosopher who, like many other women philosophers, has often felt uneasy claiming that title” (Nye, 1990, p. 5), and how perhaps it is “*only* a woman. . . a woman uncomfortable in the world of men. . . a woman too intent on emotional commitments to be capable of purely abstract thought” (Nye, 1990, p. 5) that can make the arguments she makes. More importantly, she emphasizes how “there is never only one reading” [emphasis added] or truth about the nature of logic (Nye, 1990, p. 5), because there is never only one reader. Nevertheless, she takes her experiences as generalizable, and bases sweeping conclusions about the gendered nature of logic on them. If we start from a different set of experiences, we could very easily be lead to different readings, different conclusions.

My own experience with logic has been almost entirely opposite to Nye’s. Instead of logic being a place where I am forced into a particular gender role, it is the place where I first felt freed from restrictive gender roles, where I could escape the woman = emotion/woman = body/woman = irrationality/men = rationality equations that had pervaded my life, implicitly and explicitly. Logic was where I first felt at home, a place within philosophy where my gender didn’t matter. Logicians have never judged my desire to be a logician on the basis of my gender.

How are we to reconcile two such different experiences? Without taking anything away from Nye’s conclusion that logic is not the subject for her,

I would like to explore reasons why two people of the same gender could experience the same subject in two such very different ways.

One thing that has always drawn me to logic is that it is a rule-following discipline. The rigidity of the rules is part of its attraction: You either have a proof, or you don't. Something is either true, or it is false. (Or both, or neither, but whichever combo it is, it is clearly and definitively). Sometimes your answer is wrong; sometimes it is right. And when something is wrong, or false, or not a proof, there is something that you can say which explains why. This is part of what also makes logic such a joy to teach, because there is always a reason why students have gotten something wrong, and if I can help them see that reason, then there's nothing to prevent them from fixing it and never making that mistake again.

It's only been in recent years that I've realised how connected my joy in logic is to my joy in the slavish adherence to arbitrary rules, and how much *that* is an indicator of autism. The deep-seated need to be a rule-follower (combined with a rampant desire to question everything, including the rules I want to follow!) along with an inability to deviate from the rules or to understand how other people can just blow those rules off, is one of the most central aspects of my character, and one of the strongest signs that I have that I am autistic. While I do not believe any research has been done specifically into the prevalence of diagnoses, or suspected diagnoses, of ASD within the community of logicians, anecdotal evidence indicates that the prevalence within the logical community is higher than in the wider community. This is of no surprise, that people who delight in rules and structure and clarity would be attracted to a field that is designed around these very factors!

What is perhaps more surprising is the way that these factors intersect with questions of gender. While research into the connection between gender identity or gender expression and autism is still in its early stages, recent studies have demonstrated a strong overlap between people who have atypical gender identities and people who are on the autistic spectrum (Cooper, Smith, & Russell, 2018; Lai, Lombardo, Auyeung, Chakrabarti, & Baron-Cohen, 2015; van Schalkwyka, Klingensmith, & Volkmar, 2015), with there being a higher correlation between gender variance in autistic people than in non-autistic people (van Schalkwyka et al., 2015, p. 81). This is especially pronounced amongst autistic people who are assigned female at birth, who experience this gender variance at a higher rate than autistic people who are assigned male at birth (Cooper et al., 2018, p. 3995).

The relationship between gender identity and autistic identity is complex and operates at many levels. The diagnostic criteria for autism is centered

## Logic as Liberation

around how it is manifest in male-presenting subjects, which can result in “a diagnosis of autism, with traits perceived to be male, [having] implications for how autistic natal females feel about their biological sex and gender” (Cooper et al., 2018, p. 3995). The gendered nature of the criteria for diagnosis also results in women being “less likely to be diagnosed with ASD than boys despite demonstrating similar levels of autistic symptoms” (Duvekot et al., 2017, p. 646). It is only in the last decade and a half that researchers have specifically addressed the issue of gender differences in autism diagnoses, and this only happened “a result of women themselves questioning their often late diagnosis” (Gould, 2017, p. 703).

One final point on the nature of the varied experiences of women in logic: What does it mean to call a subject or a discipline *masculine*? Nye takes it to be the fact that logic is, predominantly, a field in which men are active, and from this she draws conclusions that seek to *exclude* women. But this is to take a descriptive position and draw a normative conclusion from it, when one can just as easily draw a descriptive conclusion: If I am a feminist, and I am doing logic, then what I am doing is “feminist logic.” Similarly, if logic is to be considered a part of philosophy, then if I am a woman, and I am doing logic, then what I am doing is “what women in philosophy do.” All of this to say: It is not clear that there is any value to be gained from demarcating logic as a “masculine” subject, one that is antithetical to either feminism or being a woman. Attempts to gender the field of logic range from being misguided to being simply irrelevant.

So if you ask me “are you a man or a woman?” I will answer “I am a logician”.

## 5 The weaponization of logic

### 5.1

I asked my students to tell me, if they felt comfortable sharing this in a full lecture hall, how many of them had ever been told “don’t be so emotional” or “be more rational,” as a means of shutting down or removing them from the discourse. I was not surprised how many people raised their hands; women, at least, have been told this all our lives.

I was surprised, and saddened, by how many men did.

This is logic being used as a weapon, as a tool of silencing. It is one person telling another: “I will only interact with you on my terms, not yours.”

It is a way of denying other people a voice, a way of saying that they are not full participants in human discourse.

How can we keep logic from being weaponized?

## 5.2

I, as a logician, clearly think that logic is something valuable, the study and application of which is worth pursuing myself and worth teaching others to want to pursue. How do I know that I am not mistaken in thinking this? How do I ensure that I am not participating in oppression by promoting, using, and teaching logic? To answer these questions, we must take Nye's claim that logic is a tool of oppression or a tool of the patriarchy seriously. If it is, two questions arise: (1) How is it used as an oppressive tool? and (2) How can we mitigate this use?

One way in which logic can be used as an instrument of oppression is by using it as a demarcation of who gets to count: Whose voices are we going to listen to, in debate and conversation both public and private? When someone is told that they are not "being rational" or "being logical" in their participation in a conversation, this is not an invitation to change their behavior, but it is a means of ending the conversation or forcing them out of the discussion. Examples of this silencing can be found in contemporary pundits such as Rush Limbaugh and Jordan Peterson, but the weaponization of logic to exclude certain voices from the discussion isn't merely a modern conceit, and it isn't (and hasn't been) used only against women. As Plumwood points out, decisions about who gets to be within the sphere of reason and who is excluded from it go at least as far back as Plato and Aristotle, and

For Kant, it is not only women who are excluded from reason by their possession of a gallantly presented but clearly inferiorised 'beautiful understanding', but also workers, and blacks (Plumwood, 1993, p. 436).

The way in which logic, logicity, reason, and rationality can be used as an instrument of oppression goes beyond merely shutting people outside of conversation; it is also possible for it to be used as a means of *denying* personhood to people in the first place. If we take seriously Aristotle's definition of humans as "rational animal," then by charging people, individually or collectively, as "irrational," it is possible to deny them their essential humanity. This goes beyond just "who are we going to listen to" or "who

## Logic as Liberation

gets to speak” to “who gets to be counted even when others speak”. Who is going to get to count as “rational,” and hence of value?

In 1824, Henry T. Colebrooke presented an account of the Nyāya system of logic to the Royal Asiatic Society. This was the first time that European philosophers were exposed to non-European systems of logic (Ganeri, 2001, pp. 4–5). Such exposure was more than just the opening of an interesting field of inquiry to rarified academics: Rather, as Ganeri (2001) convincingly argues, the idea that there were “subject matter ideas and theories closely akin to those of the Greek founders of Western philosophy” [p. 5] within the corpus of Indian philosophical texts threatened one of the basic axioms of Western colonization of the East:

The assumption that the West, and the West alone, had developed a science of reason was a fundamental axiom in the justification of the colonial enterprise as a civilizational process (Ganeri, 2001, p. 4).

If, as Aristotle says, man is “rational animal,” and if Western civilisation (aka, civilisation) is built on its inheritance of Greek philosophical thought, including Aristotle’s logical corpus, then any culture that was not built upon this same foundation would not have the same access to civilisation. The colonist’s argument then goes: If we think that being civilized is a good thing, then we should be seeking to bring civilisation to other cultures. The discovery of a structured system of reasoning that had independent roots from Aristotle threatened the early nineteenth-century British colonial programme by undermining the basic principle that the West had a monopoly on principles of reasoning and rationality. It threatened “the European self-understanding of its intellectual superiority over its colonies” (Ganeri, 2001, pp. 5–6), the very premise upon which colonizers were able to justify their colonial practices.

It is hard to escape Nye’s conclusion that logic *can* be used as a tool of oppression. Given that, what can we do to reject its use as this type of tool—and can we even do so? Nye clearly thinks that there is no rehabilitating logic; its use as a tool of domination is all pervasive and inescapable. Plumwood, on the other hand, rejects Nye’s broad brush characterization of logic as *inherently* problematic, and asks:

Why does it make a case for abandoning logic, as opposed to critically reconstructing it and making much more limited claims for it? (Plumwood, 1993, p. 438).

Plumwood argues that Nye has adopted an overgeneralized and overabstract account of logic, created from the very logical structures that Nye wishes to reject. Instead, if we take a more nuanced approach to what logic is—and what it can be—we can provide space for a more positive account of logic.

Plumwood locates the problem with logic not in logic itself but in the way in which the core of contemporary logic, and the dominant tradition throughout Western history, namely classical logic, buys into a system of dualisms; it is these dualisms that make logic apt for oppression. The specific dualism that Plumwood identifies as the core problem is the dualism of negation: Classical negation is a tool of oppression, according to Plumwood, because of its dualistic nature forces us to carve up the world into *X*'s and non-*X*'s — true and not-true, man and not-man, human and not-human, rational and not-rational. This way of thinking supports “the structure of a general way of thinking about the other which expresses the perspective of a dominator or master identity, and thus might be called a logic of domination” (Plumwood, 1993, p. 442). It is the homogenizing effect of classical negation that Plumwood identifies as problematic: When carving the world up into *X*'s and non-*X*'s, it is one thing to be an *X*, but it is many things to be a non-*X*. It is one thing to be a man; but to be a non-man is to be a woman, or an enby, or any of many other things. The *X*/non-*X* binary erases all the differences in the non-*X* category, defining its members in terms of what they are not rather than in what they are. To paraphrase Tolstoy, all *X*s are alike; but every non-*X* is not *X* in its own way. Yet classical logic erases all of these distinctions under a single label, “non-*X*”.

But such a dualistic approach to negation, and othering, is not an intrinsic part of logic; it is a choice that logicians make:

The ‘naturalness’ of classical logic is the ‘naturalness’ of domination, of concepts of otherness framed in terms of the perspective of the master (Plumwood, 1993, p. 454).

That is, it is no more ‘natural’ than domination itself is. There are other accounts of negation which do not carve up the world in this dualistic way, and these logics are less able to be used as tools of oppression and domination. Since we can have logic without classical negation, Plumwood argues that Nye errs in rejecting logic completely. Instead we should reject the binary enforced by classical negation, but keep logic while adopting another type of negation (she argues for something relevant (Plumwood, 1993, p. 458); for a full discussion of how Plumwood uses relevant logic for feminist purposes, see (Eckert & Donahue, 2020)). When logic takes into account not the

## Logic as Liberation

dualistic division of the world into *X*s and non-*X*s, but rather the differences that make up the non-*X*s, then we are in a position to develop, as Plumwood (1993, p. 458) says, a “liberatory logic”—the logic that will set us free, rather than bind us.

### 6 Logic as a tool of liberation

What would logic look like, as a tool for liberation? Plumwood (1993, p. 439) says that we must “really insist that all uses of language be grounded in personal experience, the testimony of the witness, and ‘the normality of human interchange that logic refuses.’” Rather than allowing binary dualisms to erase important differences, we should embrace these differences and make them explicit. If logic is properly grounded in careful attention to personal experience, testimony, human interchange, etc., then logic no longer has to be a tool of domination:

If there is not one Logic, but in fact many different logics, if logics can be constructed which can tolerate even contradiction itself, logic itself can have no silencing role and no unitary authority over language (Plumwood, 1993, p. 440).

Instead of being used as a means of silencing, properly deployed it can be a means of giving a voice to the voiceless. In this concluding section, I would like to give an illustration of one way that this can be done.

As I foreshadowed in the introduction, this paper is partly theoretical and partly autobiographical. I bring in the autobiography precisely because it is an example of that personal experience and testimony that provides us with an exemplar of the liberatory role that logic can play. Let me return to two points discussed above, namely, the experiences that have made clear that my enjoyment in logic is an aberration, that it makes me “the wrong kind of woman,” on the one hand, and the connection I drew between what draws me to logic and aspects of myself as an autistic person, on the other hand.

As an autistic person, gender, for the most part, is simply incidental to me, a non-thing. I sometimes joke that I am “cis by default,” because being anything else would simply be too much work. I can see why the idea of being agender would be attractive; but it also seems like a big hassle, when things have gone along fine enough so far. So I am cis, I am a woman, and I am a logician. Maybe I am “the wrong kind of woman”, but if so, it is precisely because my view of my gender is mediated through my autism, which itself

is intimately linked to my love of logic. The research discussed above, on the relationship between gender identity and neurodivergence, shows that, especially for autistic women, one cannot disentangle one's experience of autism or other neurodivergence from one's experience of gender.

But *this* is what makes logic a space, a means, and a tool for freeing people rather than oppressing them, by giving them a space to exploit where their natural tendencies and inclinations lie, independent from their gender—it is precisely logic's attractiveness to people for reasons that not only have nothing to do with whether they are a man or a woman, but may in fact be rooted in the ways in which they are a man or a woman, or indeed neither.

Plumwood agrees with Nye that logic can be used as a tool of oppression when it involves reductive negation, partitioning things into  $X$  and non- $X$ ; it is oppressive because of the way it erases different ways of being a non- $X$ . But just as classical negation erases the many ways in which there can be more than one way to be a non- $X$ , something that neither Plumwood nor Nye recognize is that in many cases, there is more than one way *to be an  $X$* .

It is less the dualistic nature of negation and the way it homogenizes the “non- $X$ s” that makes classical logic a tool of oppression and more the process of homogenization itself—suppose instead of dividing the world into “men” and “non-men,” we divide it into “women” and “non-women”. Just as there is harm in the homogenizing nature of the negation “non-men,” there is harm in the homogenizing nature of “women”. Just as there are many ways in which something can be not  $X$ , there are also many ways of being an  $X$ : Just as there are many ways in which one can be a non-woman, there are also many ways of being a woman! The trap that many people, philosophers included, fall into is insisting that there is one way of being a woman (or being a “woman in philosophy”) and excluding those who do not perform in or inhabit that way.

*Logic* doesn't enforce any of these binaries or dichotomies or exclusions upon us. Logic has the potential to give the space to be maximally inclusionary. It is precisely the extent to which logic is open and available to women, including (especially!) those who don't necessarily perform femininity the way that (some) feminists may want us to, that logic can provide a space of liberation.

Let's go back to our original questions, about who is logic for, who gets to be a logician or count as a logician, who is excluded from logic, and by what means. Asking these questions matters because it forces us to either decide to exclude people, or decide no one should be excluded. If we decide no one should be excluded, we have to look at our exclusionary practices:



Where do they come from? What are the assumptions they are rooted in? How do we combat them? These are questions I cannot answer here (though which I intend to address in future work), but the first step in answering them is recognising that there is nothing *inherently* exclusionary in the study and practice of logic, and that while we must recognize that it can be used as a tool of oppression, this is not essential to logic and that it can also be used as a tool of liberation.

## References

- Cooper, K., Smith, L. G. E., & Russell, A. J. (2018). Gender identity in autism: Sex differences in social affiliation with gender groups. *Journal of Autism and Developmental Disorders*, 48, 3995–4006.
- Duvekot, J., van der Ende, J., Verhulst, F. C., Slappendel, G., van Daalen, E., Maras, A., & Greaves-Lord, K. (2017). Factors influencing the probability of a diagnosis of autism spectrum disorder in girls versus boys. *Autism*, 21(6), 646–658.
- Eckert, M., & Donahue, C. (2020). Towards a feminist logic: Val Plumwood’s legacy and beyond. In D. Hyde (Ed.), *Noneist Explorations II: The Sylvan Jungle* (Vol. 3, pp. 424–448). Dordrecht: Synthese Library.
- Ganeri, J. (2001). Introduction: Indian logic and the colonization of reason. In J. Ganeri (Ed.), *Indian Logic: A Reader* (pp. 1–25). Curzon.
- Gould, J. (2017). Towards understanding the under-recognition of girls and women on the autism spectrum. *Autism*, 21(6), 703–705.
- Hale, E. E. (1913). Women and logic. *The North American Review*, 198(693), 206–217.
- Lai, M.-C., Lombardo, M. V., Auyeung, B., Chakrabarti, B., & Baron-Cohen, S. (2015). Sex/gender differences and autism: Setting the scene for future research. *Journal of the American Academy of Child & Adolescent Psychiatry*, 54(1), 11–24.
- Nye, A. (1990). *Words of Power: A Feminist Reading of the History of Logic*. Routledge.
- Plumwood, V. (1993). The politics of reason: Towards a feminist logic. *Australasian Journal of Philosophy*, 71(4), 436–462.
- van Schalkwyk, G. I., Klingensmith, K., & Volkmar, F. R. (2015). Gender identity and autism spectrum disorders. *Yale Journal of Biology and Medicine*, 88, 81–83.

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