

Impossible conversations across radically different “frameworks”: a Critical Rationalist approach to deep disagreements

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ABSTRACT: I will briefly restate the case for a Critical Rationalist approach to the way we view argumentation practice. I will then focus on a particular deep disagreement, involving two radically different conceptions of sex and gender, drawing on Karl Popper’s essay “The Myth of the Framework” and his optimism about the possibility having “fruitful conversations” across very different belief systems and eventually resolving deep disagreements.

KEYWORDS: Critical Rationalism, deep disagreements, Karl Popper, gender identity, “myth of the framework”, sex-denialism, sex-realism

1. INTRODUCTION

The title of my paper echoes that of a “very practical guide” by Peter Boghossian and James Lindsay (2019). When I read *How to Have Impossible Conversations*, I was struck by how intensely Popperian it was, although Popper’s name was not mentioned. The authors advocate a similar method of asking questions, of criticism aimed at finding out if a particular view is amenable to being “disconfirmed” (Popper would have said “falsified”), or on the contrary will be held to be an absolute truth in spite of all the counterevidence. You *can* have a difficult conversation with an ideologue, but – the authors warn – remember that such conversations are only superficially about facts and evidence. Deep down, they are about what makes your opponents feel good and virtuous persons. Counterevidence to their beliefs is bound to be interpreted as an attack on their identity, on their values, and therefore you, the critic, will be perceived as morally evil. Still, do not despair. You may instil some doubt. Although you may not be able to change the minds of your opponents, you might persuade the wider audience, an audience which may be less hostile and more open-minded.

The authors outline a set of practical strategies for having a conversation with an “ideologue”, as a practical guide to navigating deep disagreements, those arising between people who do not only fail to share a basic set of assumptions, but also seem to be playing different “language games” and inhabit different worlds, different realities. This fundamental optimism and faith in the power of argument, reason and criticism, exhibited by Boghossian and Lindsay, reminded me of Karl Popper’s essentially similar optimism regarding the possibility of having what he called “a fruitful discussion” across very different “frameworks”.

According to Pluckrose & Lindsay (2020), the driving force of today's culture wars is a combination of a radical left-wing ideology and an applied postmodernism. Instead of this "antiliberal" and "anti-Enlightenment" trend, the authors propose a return to Enlightenment liberal individualism and universalism, to the pursuit of freedom and truth. Which is also why a return to the philosophy of Karl Popper, a rationalist and realist philosophy, driven by criticism and the willingness to learn from it, by the values of tolerance and freedom, and by an awareness of one's own fallibility – as fundamental principles of the open society – seems more relevant today than it has ever been.

Given the lack of space here, I will only briefly restate the case for a Critical Rationalist approach to the way we view argumentation practice. Popper's philosophy will already be familiar to argumentation scholars, given the grounding of Pragma-Dialectics (van Eemeren & Grootendorst, 1992, 2004; van Eemeren, 2010) in Critical Rationalism. On this view, rationality is fundamentally a methodological attitude. It has to do with the critical exercise of reason, in an extended and systematic process of critical discussion. Arriving at reasonable decisions or reasonable beliefs is possible in principle as a result of the "self-correcting capacities of a discussion procedure", which ensures maximum opportunity for the critical examination of arguments (van Eemeren et al., 1993, p. 171). If a standpoint has withstood the most severe criticism, it can be tentatively accepted as reasonable (as a potentially "true" statement or the "right" course of action).

All of the pragma-dialectical "rules for critical discussion" are relevant to assessing the controversies of today's culture wars. For example, "parties must not prevent each other from advancing standpoints or casting doubt on standpoints" (Rule 1), by "banning standpoints" or "declaring standpoints sacrosanct", thus "immunizing" them against criticism. Nor should parties prevent each other from expressing their views by "threatening", "making personal attacks" or "putting pressure" on opponents. Parties are not allowed to "distort" or attribute a false standpoint to their opponents, or defend their own standpoint by irrelevant, non-argumentative means (Rules 3 and 4), and so on. In a nutshell, everything can be discussed and challenged, and no standpoint ought to be accepted unless it has been shown to stand up to the most stringent criticism (van Eemeren & Grootendorst, 1992, pp. 208-211). It is precisely in this spirit that I will approach a controversy where these rules have not always been obeyed by both sides, where debate has been prohibited, arguments have been answered irrelevantly or by personal attacks, and acceptance of particular standpoints has often been enforced or taken for granted without the benefit of critical scrutiny.

I will focus on gender identity ideology which, in its most recent manifestation, is setting two groups of people against each other. The "gender-critical" side is made up of women and men who are critical of the notion of "gender identity" and disagree that it should take priority over the reality of immutable biological sex in defining what a woman or man is, and consequently what rights they ought to have. The other side is made up of militant activists (not necessarily speaking for actual transgender people, or being transgender themselves, but claiming to be their allies) and other sections of the population, who claim that it is one's innate, felt gender identity that makes you a man or a woman, that binary biological sex is a construct and not real, and someone's rights ought to depend on the gender they identify with, which could be different from the one they were "assigned" at birth. My purpose is to clarify what is at stake in this disagreement, mainly for the benefit of the third-party, "wider audience" Boghossian and Lindsay spoke about.

The nature of this disagreement is often misunderstood, including by well-intentioned people, and this misunderstanding has so far harmed the resolution process. In addition to this descriptive approach, I will outline the normative approach taken by a UK human rights organisation, *Sex Matters*, that has tried to critically evaluate the arguments on both sides and, in a Popperian fashion, has come up with a standpoint that seems to have survived criticism (though is not accepted by their militant opponents).

Public misunderstanding of what is really at stake – i.e. a genuine *conflict of rights*, undermining the rights of women and gay people – also results from the belief held by many well-meaning people that the scientific consensus in biology, in addition to the progressive political consensus, support the gender identity-based view. There is however a wide scientific literature showing that not only is science not settled in the way that would suit transgender activists, but their militant position does not seem to be at all similar to the legitimate civil rights movements of the past centuries, where (Black, women, gay) minorities have always aimed to gain the same equal rights as the majority, and not remove to the latter’s legitimate rights. I will review biologists’ view of the nature of sex in section 4. The fact that there is a real conflict of competing rights, between the rights claimed by transgender activists and those of women and gay people, has been in fact reluctantly admitted by Stonewall chair of trustees Iain Anderson, in an interview on Sky News (Rigby, 2023).¹

Clarifying what is at stake has been made difficult by an official strategy pursued by Stonewall activists and supporters, of refusing invitations to debate and rejecting all attempts to engage with their standpoint as “transphobic” – i.e. by definition discriminatory, unreasonable and wrong. In section 4, I will refer to the first ever live confrontation between representatives of the two sides, a debate hosted by UATX (University of Austin, Texas) between philosopher Kathleen Stock and economist and historian Deirdre McCloskey.

For an argumentation theorist, the freedom to advance, debate and criticize any standpoint is a foundational principle of the discipline. For a resolution to be possible, at least in principle, an extensive public debate must first take place, and no arguments or standpoints must be judged unacceptable before they have been aired and considered. The “no debate” strategy has harmed both sides (Fazackerley, 2020), by creating misunderstandings and distortions, by fostering extremism and violence, and by not allowing both parties to fully articulate their own position in response to objections, especially for the benefit of the wide public and of political decision-makers. This is why an open and free discussion, where both sides can put forward their best arguments and criticism, should not only be welcome but actively sought and encouraged.

In deep disagreements, both parties may never agree on the same “truth” of the matter, because they operate with different definitions for the same concepts, within different epistemological frameworks, and accept different kinds of evidence. Even so, a resolution may still be available, if not to them, then to a rational audience. This is why

¹ There is an ongoing conflict between Stonewall and the LGB Alliance (representing the interests of gay people). This indicates that the rights of each minority under the LGBTQ+ umbrella are not equally well represented within Stonewall, and Stonewall’s militancy has become one sided, promoting the rights of transgender people *at the expense of* the sex-based rights of women and gay people. Two court cases have already been won by the LGB side (Siddique, 2022; Gentleman, 2023; Sodha, 2022, 2023).

convincing the other party may be less important than convincing the wider public, including decision-makers, and clarifying the implications of the standpoints for them. Even in the absence of an epistemic resolution acceptable to both, the parties can nevertheless come to a practical agreement, regarding questions of policy. What should the law look like if the rights of everyone involved – men and women, heterosexual and homosexual people, and self-identified transgender and non-binary people – are to be respected, and no one group’s rights are to be undermined by granting more rights to another group than warranted by fair equality laws? Essentially, no epistemic agreement is required for a resolution at the practical, political level.

In a democratic society, disagreements must receive political solutions that enable the supporters of radically different views to live side by side, without undermining each other’s rights. An open, tolerant and liberal society accords everyone the maximum freedom that is compatible with the maximum freedom of everyone else. Regardless of what people believe to be true and false, social life is possible without conflict as long as no one tries to impose their particular set of beliefs on everyone else, and force everyone to convert to their chosen worldview. To do so would be violating the rights and freedoms of others.

2. DEEP DISAGREEMENTS FROM A CRITICAL RATIONALIST PERSPECTIVE

All our knowledge, Popper argued, is conjectural. The growth of knowledge, which he saw as “problem-solving”, is a combination of bold guesses and deductive inferences. Scientific knowledge is not derived from anything. It is conjectural, guesswork, tested by observation, not derived from it (Miller, 2005; 2010). Scientists make bold, imaginative conjectures, trying to account for what is seen in terms of the unseen, aiming to come up with better explanations than older or rival ones. The search for good explanations is the origin of all progress. If they are indeed better, new theories should have greater empirical content and predictive power and be capable of explaining everything that previous theories could explain, and also explain some hitherto anomalous phenomena or solve some hitherto unsolved problems.

Critical Rationalism is the attitude of admitting that “I may be wrong and you may be right, and by an effort, we may get nearer to the truth” (Popper, 1945/1966, p. 225). This fallibilistic attitude lies at the core of Popper’s Critical Rationalism. But he seems to be presupposing a “joint” effort of getting at the truth, an unconstrained dialogue, and this collaborative attitude is not always shared by both sides. Popper was optimistic about the possibility of resolving deep disagreements in the long run but warned that it is unrealistic to expect an argumentative opponent to give up a standpoint easily, even when the evidence seems to contradict it.

In a critical argument (which is a refutation), we assume that our hypothesis is true, for the sake of the argument. If our argument is valid and the conclusion we reach is false, then the falsity of the conclusion is retransmitted to the premises we started with. Our hypothesis was therefore false. The mode of inference is a *reductio ad absurdum*, where a logical contradiction is uncovered at some point in the derivation, some R and non-R. This logical contradiction, being unacceptable, indicates something was wrong with the original hypothesis (Miller, 2012, p. 96). Criticism of a hypothesis is criticism of its consequences, not criticism of any premises on which it is allegedly based. The main purpose of a

deductive inference from a set of premises is to expose any unacceptable consequences that they may have (Miller, 2006, Chapter 3; Miller, 2010).²

Popper addresses the problem of deep, apparently irresolvable disagreements in his essay “The myth of the framework” (originally published in 1976, and republished in 1994). He states this “myth” simply in one sentence as follows: “A rational and fruitful discussion is impossible unless the participants share a common framework of basic assumptions” (Popper, 1994, p. 34). This is the false belief that he sets out to criticize.

In contradiction with the standard view in argumentation theory, Popper holds that two people who disagree do not need to share a set of common assumptions, a common intellectual framework, or what Fogelin (1985) calls common “framework propositions”. Nevertheless, they can have a “rational and fruitful” discussion, though they may remain unable to persuade each other. In the process, the opponents will sharpen their own arguments, learn to see things from a different point of view, challenge and expand their intellectual horizons. The existence of “frameworks” is not a myth. What is a myth is the proposition that we cannot “fruitfully” discuss them, and also that we can never break out of them, that we are doomed to remain trapped inside them as intellectual “prisons”.

All our observations are under the sway of some framework, they are already interpreted. But the fact that we may be prisoners of theories should not prevent us from progressing towards better theories. How do we do this? By formulating our beliefs in language, thus objectifying them, and making them targets for public criticism. In order to be maintained, our beliefs ought to survive criticism in dialogue with others. Critical rationality is an attitude of readiness to correct one’s beliefs, in response to disagreement, through critical discussion.

The “myth of the framework”, Popper says, is a version of the mistaken idea that a rational discussion must have the character of a justification of a thesis by appealing to admitted premises. Therefore, if there are no such shared premises, no common ground, there can be no resolution. But the kind of discussion going on in the sciences, he says, is very different: it does not try to justify a theory, but to test it experimentally to see if its logical consequences are all acceptable. This method will sometimes enable a resolution, in the sense that a theory will emerge as a better approximation to the truth than another, a better explanation than another. We do not need shared assumptions, we only need the method of conjectures and refutations, which avoids the circularity that affects the justificationist approach (Popper, 1994, p. 60).

Popper’s minimal definition of the “myth of the framework”, in terms of a “fruitful discussion” seems somewhat unsatisfactory. It does not seem to address the crux of the matter: are there disagreements that are finally irresolvable in principle, not just unresolved? Saying that “frameworks” can be criticized seems to evade the question of resolution. Frederick, a Popperian scholar, draws out a little more clearly the implications of Popper’s position in this essay. For a Critical Rationalist, Frederick argues, there are no disagreements that are irresolvable in principle. The mistaken idea that some

² I have used this perspective to look at a few public debates, mainly in institutional settings. Typically, the arguers were criticizing the proposal of their opponents by pointing out potential consequences: unacceptable risks and impacts, unacceptable conflict with moral values, and so on. Most of these debates were the kind of reasonable disagreement found in politics (Fairclough, 2016, 2018, 2019a, 2019b, 2022). For the Critical Rationalist, “rational decision-making” means the “rational making of decisions”, i.e. according to a methodical procedure, and not the “making of rational decisions” (Miller, 1994, p. 151, Miller, 2006, pp. 111-112; Miller, 2010, p. 2).

disagreements are irresolvable comes from failing to appreciate the role of conjectures in the dynamics of the growth of knowledge. Two people do not need to share any premises, but they can always use arguments to refute each other's standpoint, i.e. attempt to derive propositions that are unacceptable to their opponent from the opponent's own standpoint. Thus, there are no disagreements that are not in principle resolvable by argument, but no disagreement between rational people is *conclusively* resolvable by argument, because further progress in knowledge is always possible (Frederick, 2020, p. 132).

In Argumentation Theory, the literature on deep disagreements is vast (Fogelin, 1985; Feldman, 2005; Adams, 2005; Siegel, 2013; Aikin, 2019, 2020; Aberdein, 2020, 2021; Ranalli, 2021, Popa, 2022, etc.). Scott Aikin (2019) has systematized it as involving a continuum between pessimists (e.g. Fogelin) and optimists (e.g. Siegel). Popper would belong at the optimistic end – for both theoretical and practical reasons. For him, the idea that we cannot have a fruitful discussion unless we share a framework “is not only a false statement, but also a vicious statement which, if widely believed, must undermine the unity of mankind, and so must greatly increase the likelihood of violence and war” (1994, p. 35). We must make an effort to have rational discussion across frameworks, he says, because otherwise we may fall prey to a pernicious form of relativism and non-judgmentalism (Popper, 1994, pp. 45-46).

Disagreement should not prevent two opponents, or any “rational others”, from arriving at political compromise solutions, which may be different in different times and places, and may change over time. It is therefore to be expected and hoped that the dispute between those engaged in the controversy over sex and gender identity will receive a political solution that will not undermine the rights of either group, and will take into account the undesirable consequences of previous practices and decisions, that have materialized in the meantime.

The unresolved conflict between the activist supporters of gender identity ideology and their gender-critical opponents seems very deep at the moment. From its familiar version which, once upon a time, said that sex is real, defined in terms of reproductive anatomy, but gender is a social construct, gender theory seems to have morphed into its opposite: the real and binary nature of sex is now being denied, and gender identity is taken to be the only reality, a real and innate sense of who you are, and which may be at odds with the sex that you were “assigned at birth”. Gender identity, not biological sex, is allegedly what makes you a man or a woman (or neither).

Would a critical rationalist agree that we are being confronted with a deep disagreement here? Fogelin's examples could not be resolved by a straightforward appeal to empirical facts (they involved social, institutional facts – being a “person” or having “rights”). But when it comes to the dispute over the nature of sex, most people would argue that there is a material bedrock of reality against which statements can be tested – the very same empirical reality that previous civil rights battles, for the rights of women, racial and gay minorities, appealed to. There is also a bedrock of legitimate institutional reality: a framework of human rights that requires the rights of other social groups, of society at large, not to be undermined in the process of recognizing the rights of any minority group. Both truth and justice as regulative ideas or normative standards ought therefore to allow a resolution, through dialogue and critical discussion, and a suitable political solution ought to be possible.

The Critical Rationalist will point out that some disagreements only seem irresolvable because the “preconditions” necessary for a fruitful discussion are absent, i.e. “a wish to get to, or nearer to, the truth, and a willingness to share problems or to understand the aims and the problems of somebody else” (Popper, 1994, p. 35). This disagreement would presumably be a good example of such a situation. If both parties were willing to engage in critical discussion in the same way, the Critical Rationalist might say, this disagreement might be resolved. As Popper warned, preventing debate from taking place will often degenerate into violence and incitement to violence, as several serious incidents in the UK have recently shown (Mitchell, 2023; Sanderson, 2023; Slater, 2023; O’Neill, 2023; Smith, 2023).

For the argumentation theorist, immunizing a standpoint by “banning” its discussion or blocking criticism is a violation of one of the most fundamental rules of the practice (the *freedom rule* in pragma-dialectics). This is why trying to lay out the arguments on both sides and explain what the disagreement is about should not automatically expose the analyst to accusations of discrimination and “transphobia”. And if indeed it is the missing preconditions that prevent resolution in this case, and not the irresolvable nature of the disagreement, the Critical Rationalist ought to publicly defend the existence of those pre-conditions, as essential to an Open Society. This is a disagreement that has practical consequences for people, and – as both sides claim – involves questions of justice. Popper did say that we have a duty to analyse, understand and compare institutions and laws, from an impartial viewpoint of justice, because different arrangements “may make all the difference for those living under them”. There is right and wrong, assessed in terms of the practical consequences on people. In such situations, “a critical discussion is not only possible, but most urgently needed”, a task which is “often made difficult by propaganda and by a neglect of factual information (Popper, 1994, p. 46).

How, the Critical Rationalist might ask, is it possible for this particular disagreement to be maintained as an unresolved one? The current literature (Williams, 2022; Doyle 2022), as well as many reports in the press (Woolcock, 2021; Williams, 2021; Rustin 2022; Pearson, 2023, etc.), and also a recent report by the UK’s leading think tank Policy Exchange (2022) speak about “institutional capture” – about how unelected organisations have been shaping the rules and norms of national institutions, such as the NHS, the Civil Service, universities, the BBC, including reinterpreting the law, and radically reordering the system of power relations in society.³

Another explanation for what seems to be an irresolvable disagreement (incidentally supporting Fogelin’s view) is the absence of a shared conception of reality between the two parties. Andrew Doyle (2022) speaks about the fundamentally subjectivist epistemology that enables gender identity ideology to survive criticism from the perspective of its supporters. The gender-critical side appeals to objective, material reality, and a correspondence theory of truth. Transgender activists (though often not speaking for

³ In the UK, however, several institutions (the BBC, the Equality and Human Rights Commission, Ofsted, Ofcom, the Cabinet Office, the House of Commons, Channel 4, various banks, as well as several universities, e.g. University College London, the London School of Economics, etc.) have quit Stonewall’s Diversity Champion Scheme over perceptions that its advice has been biased and illegal, incompatible with defending the rights of women and gay people. Many institutions are now rowing back on Stonewall-inspired policies (see reports in the press – Bartosch, 2021, 2023; Quinn, 2023; Somerville, 2021, 2023).

all transgender people) adhere to a form of “standpoint epistemology” grounded in everyone’s personal “lived experience” and personal “own truth”.

Andrew Aberdein (2020) cites philosopher Michael Lynch, according to whom a “deep disagreement” must meet the following conditions:

1. *Commonality*: The parties to the disagreement share common epistemic goals.
2. *Competition*: If the parties affirm distinct principles with regard to a given domain, those principles (a) pronounce different methods to be the most reliable in a given domain; and (b) these methods are capable of producing incompatible beliefs about that domain.
3. *Non-arbitration*: There is no further epistemic principle, accepted by both parties, which would settle the disagreement.
4. *Mutual Circularity*: The epistemic principle(s) in question can be justified only by means of an epistemically circular argument (Lynch, 2010, p. 265).

A deep disagreement, therefore, is not just over simple assertions but over the epistemic principles and methods for acquiring knowledge that generate such incompatible or contrary assertions. Does this disagreement meet these conditions?

Arguably, “truth” is the stated epistemic goal of both sides (condition 1). Each side can in fact claim truth is on their side, because the criteria each uses for evaluating statements as true or false are radically different. Their radically different epistemologies are in competition (condition 2) and are generating incompatible beliefs. For example: A transwoman is a woman vs. A transwoman is a man; Sex is a spectrum vs. Sex is binary; Gender identity is real, and sex is a construct vs. Sex is real, and gender identity is a construct; Sex can be changed vs. Sex is immutable, and so on. Moreover, there seems to be no further epistemic principle that could resolve the issue that both sides will accept (condition 3).

Condition no 4 (epistemic circularity), as a defining feature of deep disagreements), seems fully satisfied by the belief system of gender identity ideology. Gender is explicitly assumed to be something everyone has absolute first-person authority on. By questioning people’s own gender identity, a critic would be refusing to accept a truth that only they have access to, denying their reality when this is all the reality there is. This subjectivist epistemology of “lived experience” is however very remote from Popper’s views:

All knowledge is theory impregnated, including our observations.... We must reject as completely baseless any subjectivist epistemology which proposes to choose as starting-point ... our “direct” or “immediate” observational experience (Popper, 1972/1979, pp. 70-71).

The fact that all our perceptions are “theory-impregnated”, Popper argued, does not mean that we are stuck inside a subjective framework, an intellectual prison, without access to reality. Our knowledge of the world emerges from confrontation with reality. We *can* have knowledge of reality because our attempts to impose conceptual structures on reality often fail and we learn from our errors. Metaphorically speaking, collisions with the brick wall of reality indicate that our theories, however much cherished, may be wrong.

Critical Rationalism is said to avoid the circularity that affects other forms of rationalism and irrationalism alike. In Chapter 24 of *The Open Society*, Popper (1945) argued that justification can never escape circularity (because supporting evidence has to

be justified by further evidence, and so on), whereas refutation (part of a falsificationist epistemology) can (see also Miller, 2006, 2007, 2012). Recourse to experience, to observation – i.e. drawing out the logical consequences of our conjectures and seeing how they survive confrontation with external reality – is what avoids circularity.

An interesting argument has been made by Frederick (2020), who claims that Lynch's condition number 3 is never met, if we are to accept Fogelin's (1985, p. 8) reference to the two parties as "rational", as "unbiased, free of prejudice, consistent, coherent, precise and rigorous". For two such parties would minimally have to accept deduction as an epistemic method, if they are to engage in argumentation at all. Deduction, as Lynch admits, has widest scope among basic epistemic methods, "since deductive inference from true premises, if it is reliable, is reliable for forming beliefs of any sort" (Lynch, 2010, p. 265). Deduction can therefore fulfil the role of a shared principle that can resolve a deep disagreement.

If a party should refuse to accept a deductive argument (e.g. a Modus Tollens) or use deduction at all, this would make that party irrational. The disagreement would remain unresolved because one of the parties would be refusing to behave rationally. Briefly, if both parties are rational, although in disagreement with each other, they would have to minimally accept the applicability of deduction as method (hence, a Critical Rationalist deductivist methodology). In case both parties should refuse the applicability of deduction to their dispute, a rational resolution might still be available to "rational others", who do accept deduction. Frederick's logical conclusion, which presumably would be Popper's as well, is that "there are, then, no deep disagreements that, in principle, cannot be resolved by argument, if the parties to the disagreement are rational" (Frederick, 2020, p. 120).

To conclude, from a Critical Rationalist perspective, the disagreement between the supporters of gender identity ideology and their gender-critical opponents is "intense without being deep", to use Fogelin's expression. It could be resolved, if the necessary "preconditions" in terms of attitudes and availability for dialogue existed, and if both parties behaved "rationally", which minimally involves the acceptance of basic argument forms. But even if the argument should remain temporarily unresolved between them, a resolution for a third-party rational audience is always possible. Regarding Lynch's conditions 1-4, it would seem that (from a Critical Rationalist perspective) condition 3 is never true, assuming both parties are rational, while condition 4, if what they are trying to do is "justify" (not refute), is always true. Thus, the Critical Rationalist would say that there is always a way of "arbitrating", that we are not inescapably prisoners of our frameworks, and that – while justification is always circular – falsificationism (deductivism) as method is not. (I will return to condition 1 later.)

3. THE *SEX MATTERS* PETITION: A CRITICAL RATIONALIST METHODOLOGY

One of the most recent manifestations of the disagreement I am looking at concerns the UK human rights organisation *Sex Matters*, under the direction of Maya Forstater (who lost her job in 2018 for defending the reality of sex and sex-based rights, but later won her Employment Tribunal case on appeal), Helen Joyce (author of the best-selling book *Trans. When Ideology Meets Reality* – Joyce 2021), and lawyer Naomi Cunningham.

In November 2022, *Sex Matters* launched a petition (*Sex Matters*, 2023a) demanding the UK government to clarify the use of the word "sex" in the Equality Act of

2010 and make it clear that “sex” means biological sex, as it was intended to mean, and not “gender” (that is, not “sex as modified by a Gender Recognition Certificate”). This would protect the rights of people of both sexes, as well as people who identify as transgender. My purpose here is to describe the disagreement between the members of this organisation and the Stonewall activists who reacted to the petition, and cast a Critical Rationalist perspective on it, by describing the methodology employed by *Sex Matters*.

I am only referring to the situation in the UK, and only dealing with the impact of gender identity ideology on the rights of women. Gender identity ideology seems to have met with more resistance in the UK than in the US. There are for example, almost 30 organisations in the UK that defend “sex-realism” (*Sex Matters, Fair Play for Women, the LGB Alliance, Women’s Place UK, For Women Scotland, etc.*), and some of these have emerged from the left of the political spectrum, some from more conservative or unaligned quarters. In the UK, the Labour Party has recently signalled its distance from gender identity ideology. Labour leader Keir Starmer has expressed a new commitment to upholding women’s sex-based rights (explicitly, not allowing transgender rights to undermine women’s rights), and has relinquished Labour’s previous commitment to gender self-identification legislation (Moore, 2023).

In the UK, so-called “gender-critical beliefs” – defined in law as the belief that “biological sex is real, important, immutable and not to be conflated with gender identity” (Brione, 2022, cited in Sullivan & Todd, 2024) – are protected under the Equality Act of 2010. The case of Maya Forstater has created the legal precedent that gender critical beliefs are “worthy of respect in a democratic society” (Forstater vs CGD Europe and Others, 2021). A similar verdict was handed in another landmark case involving barrister Allison Bailey vs Stonewall (Bailey vs Stonewall, Garden Court Chambers and others, 2022). These precedents now give women protection against unfair dismissal on account of expressing beliefs contrary to gender identity ideology and make it illegal to discriminate against someone on the basis of their gender-critical beliefs.

In the documents accompanying the petition (see their website, <https://sex-matters.org/>), *Sex Matters* describe the legal situation in the UK as follows. The Equality Act protects everyone in Great Britain from discrimination and harassment. Protection against unlawful discrimination is based on nine protected characteristics, among which are “sex” (being male or female) and “gender reassignment” – N.B., not “gender identity”. (The others are age, race, religion/belief, disability, sexual orientation, marital status, pregnancy/ maternity). In most situations it should not matter whether someone is male or female, but there are situations where it is lawful to treat men and women differently. It is these lawful exceptions, permitting discrimination (unequal treatment), inscribed in the Equality Act, that Stonewall activists have been trying to have removed from the Act; they have also been lobbying for the replacement of the protected characteristic of “gender reassignment” by “gender identity” (Women’s Place UK, 2018).

The Equality Act allows employers and service-providers to offer services and accommodation separately for men and women, when there is a good reason for doing so (this is called “a proportionate means to a legitimate aim”), i.e. for reasons having to do with safety, privacy, dignity, fairness. The Equality Act also includes a separate protected characteristic of “gender reassignment” which covers people who identify as transgender or transsexual. A person should not be harassed or discriminated against because of being transgender. But it does not mean their sex has changed, or that other people are required

to pretend to believe that it has. Being transgender, under the EA 2010, does not mean that a person has the right to use services intended for members of the opposite sex, because this might impact the safety, dignity, privacy of other users. It can be “proportionate” (and allowed by the law) to limit trans people’s access in such cases.

As *Sex Matters* argues, in order for the provisions regarding sex discrimination to make sense, the word “sex” needs to mean biological sex, the way it was intended in 2010. The way the Gender Recognition Act (2004) interacted with the Equality Act (2010) has resulted in the protected characteristic of sex, as in being a biological female, being undermined, with males gaining access to single sex spaces and services because the law was misunderstood and misrepresented, often deliberately by interested parties. However, according to the Equality Act, it has always been perfectly legal to exclude males from female-only spaces and services in those situations when someone’s sex is relevant. The legal sex-based exemptions include single-sex sports, domestic violence shelters, hospital wards, prisons, hospital wards, changing rooms, toilets and so on, including jobs where a particular sex is an occupational requirement. The fear of being sued for discrimination, the onerous obligation placed on employers and institutions to justify exclusions on a case-by-case basis, together with often biased legal advice, have made institutions reluctant to enforce these legal exceptions wherever transgender individuals were concerned. In this way, unacceptable consequences have arisen: male transgender athletes were allowed to compete in women’s sports, male transgender convicts were housed in women’s prisons, and so on. So, the *Sex Matters* petition argues, the Equality Act should say clearly that the legal exceptions (i.e. when it is legal to exclude male-bodied individuals) operate on the basis of biological sex, rather than the gender someone identifies as.⁴

Sex Matters explain how they have come up with their particular proposal, out of possible alternatives, how they have tested these alternatives, and discarded some in light of their foreseeable consequences. Their methodology seems remarkably (though not explicitly) Popperian. They started from a “problem” that needs resolving – the impact on women’s rights of the confusion created by the unclear use of the words “sex” and “gender” in the Equality Act, which states that sex is binary (male and female), but sometimes uses these words interchangeably because the distinction did not seem to matter at the time.

The most interesting aspect of this methodology is its so-called “strategic framework”, made up of two “immovable facts”. The legal solution (clarification) being proposed has been tested in relation to these facts: 1) “firstly there are only two sexes, sex is binary and immutable – that is the material reality”, and 2) secondly “everyone has human rights” – this is the overarching institutional reality, a “human rights framework”, based on the European Convention of Human Rights. As *Sex Matters* explains, the “tests we have set ourselves”, or the “four tests that we applied when we were trying to come up with a proposal” were in the form of four questions that the proposed amendment had to be able to answer in the affirmative (thus indicating that it can survive criticism). To paraphrase them, will the proposal achieve the stated goals – i.e. protection of everyone’s rights, without undermining the rights of any one group? Is it preferable to alternatives, by being more easily practicable and offering a simpler solution? Have all the “unintended

⁴ The online petition was signed by more than the minimum 100,000 people that is required for Parliament to have the obligation to debate it, and the debate was scheduled for the 12 June 2023 and has taken place, with promising results so far for the gender-critical side.

effects”, all the possible “risks” and “harms” been examined, addressed and mitigated in an acceptable way? ⁵

According to the proponents, the amendment satisfies the requirement of being able to “respect everyone’s rights”, transgender and non-transgender people, as well as the “material reality” of binary sex. It is therefore a proposal that survives criticism from a normative point of view, by being fair and impartial to all groups concerned. No one’s rights are undermined by inadvertently tilting the balance in favour of one group at the expense of another. Balancing together the rights of various groups and making sure that no one’s rights are “destroyed by accident”, by the “misunderstanding of words”, are essential in arriving at a fair compromise solution. (The quotes are from the Equality Act webinar, *Sex Matters*, 2023b).

The amendment, they argue, is needed because the law can be (and has been) misinterpreted to say that a Gender Recognition Certificate changes someone’s sex *for all purposes*, not just for a limited number of legal purposes. If a trans woman is *literally* a woman “*for all purposes*”, including for the purposes of the Equality Act, it becomes impossible to exclude transwomen (that is biological men) from any women-only space, service or sport, and the Equality Act’s legal sex-based protections for both men and women are destroyed. To conclude, clarifying the act by stating that “sex” means “biological sex” and not sex as modified by a Gender Recognition Certificate is the simplest and most efficient solution in light of the stated goals: it will restore women’s rights to safety, decency, privacy, and fairness in competitive situations, while also protecting everyone else’s rights – be they transgender or not.

After the petition was sent to Parliament, on the 4th of April 2023, Baroness Falkner, chair of the Equality and Human Rights Commission, replying to a request from Minister for Women and Equalities Kemi Badenoch, officially endorsed the petition, in a public letter (*Sex Matters*, 2023c), agreeing that sex should be understood everywhere as biological sex to protect the rights of women and gay people, and correct a number of “anomalies”. The letter shows how the EHRC has undertaken its own analysis of the consequences of the proposal, guided by its stated mission to “contribute to public debates and clarify the law on equality and human rights issues, particularly in the area of balancing competing rights”, and has come in favour of the amendment. The proposal was also greeted as reasonable by some members of the transgender community (e.g. Debbie Hayton – see Hartley-Brewer, 2023).

However, a snapshot of reactions to the EHRC letter, collected around the date of 6 April 2023, shows that the reaction was very negative in certain militant circles. In a nutshell, the proposal to clarify that “sex” means “biological sex” was said to be “evil”, and was equated with “fascism”, “Nazism”, “genocide”. It was “unutterably cruel”, “inhuman”, “sickening”, “appalling”, “life-threatening”, and “demonising” transgender people. A prominent transgender barrister said: “Badenoch, Falkner and the whole *Sex Matters* crew are EVIL.” Another transgender activist described *Sex Matters* as “a hate group”, as “fanatics”. A militant transgender academic at Edinburgh University qualified

⁵ For example, alongside female and male-only spaces and services (*but not in place of them*), *Sex Matters* suggests that it would be possible to create a *third* unisex category (unisex toilets or changing rooms – different from the “gender-neutral” ones recently created in some public spaces), as mitigation. In sport, a third, “open category” could make sure that males do not compete in the female category, thus removing the unfair competitive advantage over women given by their male biology.

the proposal as “fascism” and called like-minded people to action in the face of “rising fascism” in the UK (data available on request).

Sex Matter’s carefully constructed argument, their methodology involving proposals tested against facts and evidence (and not affecting the GRA in any way, i.e. not removing any of the legal protections for transgender people), received therefore a set of replies in damning moral terms. These reactions do offer a moral evaluation but absolutely nothing in the way of argument. The argumentation analyst would expect supporters of gender identity ideology to be able show why Sex Matter’s standpoint and arguments are unreasonable. If indeed *Sex Matters* are a bunch of fascists and Nazis, what is it about their arguments that is discriminatory and extremist? What these militant activists would be expected to do is explain why it is wrong and discriminatory for women to insist on preserving their sex-based rights, and consequently their female-only spaces, services, associations, sports. Dismissing these demands as manifestations of “hate” and extremism, and without providing any reasons at all, is counterproductive and not likely to enable progress towards a mutually satisfactory solution.

The ubiquity of moral condemnation in response to factual disagreement (e.g., if you disagree, you are evil) is quite striking in the culture wars, as has been often observed (Murray, 2019; Embery, 2020; Doyle, 2002). From the realm of fact and evidence, any difference of opinion is immediately shifted onto the moral domain. It would seem that Lynch’s condition no 1 is therefore not satisfied either: the pursuit of truth does not seem to be the common goal, as epistemic arguments are not answered in their own terms, with other epistemic arguments. The goals of the two opponents seem to be very different.

4. REALIST AND ANTI-REALIST VIEWS OF SEX AND GENDER IDENTITY

When people claim that only an adult of the female sex can be a woman, or, by contrast, that being a woman is a matter of self-identification or lived experience, where do they take their ideas from? I will briefly look at the views of a few feminist philosophers (both postmodern and materialist), on the relationship between sex and gender, then at a fascinating debate between a gender-critical feminist (Kathleen Stock) and a transgender woman and highly influential academic (Deirdre McCloskey), hosted by the University of Austin, Texas, in March 2023 (UATX, 2023). Finally, at how sex is defined in biology.

In the new Routledge reader on *Sex and Gender* (Sullivan & Todd, 2024), radical materialist feminist Jane Clare Jones distinguishes usefully between “sex (biological and immutable), gender (roles and behaviours that are socially and politically constructed) and gender identity (the notion that each human has an innate sense of their own gender)” (Jones, 2024, p. 69). The core claim of gender identity ideology, she says, is that “being a man or a woman is a matter of gender identity rather than biological sex”. Hence the attempt, by militant organisations, to erase sex as a category and replace it with gender identity designations in law, language, policy, data collection and the organisation of public space, primarily in the Anglophone world, in the last two decades, through the process of “policy capture” or “institution capture” (Jones, 2024).⁶

The idea that “gender identity trumps sex” rests, in Jones’ view, on two core beliefs. The first (a form of “gender identity essentialism”) is that human beings have an internal sense of whether they are a man or a woman, which may not be aligned with their biological

⁶ See Kirkup (2019) on the strategies employed for this purpose.

sex. The second is a form of “sex denialism” – a belief that sex is not a material reality, and that being male or female are social, historical, ideological constructs that serve the interests of “power”. A gender-critical materialist feminist will hold exactly the opposite: sex is real and immutable, while gender identity is a recent historical concept, a cultural construct (Jones, 2024, pp. 70-71). Jones proceeds to examine three main sex-denialist arguments, of which the most relevant one for my discussion is the “sex-is-a-spectrum” argument, i.e. the denial of the real and binary nature of sex. I will return to it later.

What do other feminist philosophers say? Elizabeth Barnes outlines two main strands in contemporary philosophical accounts of gender: social position accounts and identity-based accounts. There is “a common worry” for each, she warns: “that they fail to correctly determine the class of people who should count as women (or men, or non-binary, etc)”. In both strands, the philosophical project is explicitly “political” and “ameliorative”: what *should* these concepts mean? What *should* the extension of these words be? In what way do we want current conceptions to *change* to be more “inclusive”? (Barnes, 2020).

Older “ameliorative” social position accounts (Haslanger, 2000, 2012) – according to which being a woman means occupying a subordinate place in a hierarchical structure of power, as a result of one’s perceived reproductive capacities – have more recently been deemed “problematic” (Jenkins, 2016; Barnes, 2020), because they allegedly risk excluding certain women from the extension of the word “woman”. According to Barnes (2020), “trans women who don’t pass as cis women aren’t regularly and for the most part perceived as having features associated with a female’s role in biological reproduction, but they’re still women”. Similarly, “some women don’t occupy a social position that is in fact subordinate, while still being women”.

In contrast to social position accounts, Barnes explains, identity-based accounts “take gender identity to be a crucial part of what determines – or what ought to determine – the extension of our gender terms ‘woman’, ‘man’, ‘genderqueer’, ‘agender’...”. Thus, “what gender you are is determined by how you feel about yourself, how you are inclined to behave, which groups you see yourself as belonging to...”. It is therefore possible “that people treat you as being a gender other than the gender you really are”. In more detail:

Regardless of whether they are perceived by others as women, trans women self-identify as women, and on identity-based accounts that’s what matters. (...) You can ... be a woman and be the only one who realizes that, or be a woman despite the fact that others react to your gender presentation by telling you that you are lying or delusional (...) The idea [is] that women are all and only the people who identify as women, and that we should use our term ‘woman’ to reflect this (Barnes, 2020).

Defining what a woman is, according to these feminists, seems to be a militant-political enterprise, not a descriptive one: what *ought* the word to mean, how *should* we try to change (“ameliorate”) its existing meaning, so that it can include both women and transwomen? What unites these views, significantly, is the belief that it is false to claim (in Barnes’ words) that “there’s something that it really is to be a woman, be a man...”, some objective properties that set men and women apart. There are no “mind- and language-independent facts”, nor “any objective, language-independent facts about which individuals count as women” (Barnes, 2020). Similarly, according to Bettcher (2013), “a person’s gender is determined by their sincere self-identification with that gender”. You are woman, on this view, “if you sincerely self-identify as a woman”.

Not all feminists embrace this socially constructivist view about sex. In particular, materialist, gender-critical feminists disagree that there is nothing about being a man or woman that is objective and language-independent, or that gender identity can replace sex. As UK barrister Allison Bailey (founder of the LGB Alliance) explains, gender-critical feminism is a well-established strand of feminism. It holds that sex is a material, observable reality. For gender-critical feminists, sex is a natural category, and gender and gender identity are social, cultural ones. As a consequence, a person who adopts the gender identity of a “transwoman” (a male who identifies as a woman) is not a woman. A “transman” is not a man. Sex is immutable, and the legal provisions that are reserved for women are reserved for them on the basis of their sex, not gender (Bailey, 2021).

This radical difference of opinion (underlain by different philosophical positions – realism vs anti-realism/ social constructivism) emerges clearly in a public debate between Kathleen Stock and Deirdre Mc Closkey (who transitioned at the age of 53). McCloskey defends a view of becoming a woman as analogous to becoming a lawyer, or assuming any other social or professional role. For Stock, being a woman is a material fact about oneself that one has no power to change.

Kathleen Stock, formerly at the University of Sussex, now at UATX (University of Austin, Texas), has become famous for her view, expressed in her acclaimed 2021 book, *Material Girls. Why Reality Matters for Feminism*, that to believe that sex is not real, but gender identity is, and that people can change sex, is akin to “immersing ourselves in a fiction” (Stock 2021, pp. 178-211). We do this when we read novels, watch films or plays, or just daydream. When immersed in a fiction, she says, our aim is not to recognise and respond to the world as it actually is. And there is nothing wrong with that, because fictions are supposed to be enjoyable and harmless, and we are always aware that they are after all fictions, not literally true. For a man to self-identify as a woman is to immerse himself in a fiction, and is not literally true. The UK 2004 Gender Recognition Act created the “legal fiction” that a person can change sex. This means that, for certain limited purposes (marriage, pension), a transsexual person can be treated in law as if she or he has changed sex. A “legal fiction” is created when the law acts as if something is the case, for certain defined legal purposes, when in fact it isn’t. (For example, in law, a company is treated as a person – this is a standard example of a legal fiction.) Although it is not possible to literally change sex, she says, the fact of granting someone a Gender Recognition Certificate treats a person as if that person has changed sex.

There are many transgender people who do not choose to “immerse” themselves in this “fiction”. Debbie Hayton, a regular columnist on gender ideology in *Unherd*, *Spectator*, *Spiked*, is one of those transwomen (biological males) who say about themselves that, being transwomen, they remain biological males. Hayton (and others) disagree with the extreme positions taken by some transactivists and publicly defend the gender-critical standpoint (Hayton 2021, 2022a, 2022b, 2023a, 2023b, and Hayton n.d. – article archive at *Unherd*; also *Spiked*, 2020).

As Kathleen Stock observes, large-scale social problems emerge when institutions coercively make it a social norm that everyone immerses themselves in the fiction that certain people have changed sex, or are non-binary, on pain of social sanction if they do not. And these days, she says, “immersion in a fiction about sex change is being coercively required of people” in many institutional settings (Stock, 2021, p. 197). Since 2004, the pressure in the UK has been for an ever stronger, more extreme interpretation and

inscription of the original legal fiction as fact in law, institutional norms and everyday interactions.

The Stock-McCloskey debate (UATX, 2023) is a rare opportunity to hear two opponents arguing face-to-face on the question of sex, gender and gender identity. Throughout the discussion, the two opponents acknowledge that their disagreement is very “sharp” and “profound”, a profound “philosophical” and “epistemological” difference, but they also recognize several zones of agreement. For example, Deirdre McCloskey (henceforth, DMC) agrees, with Kathleen Stock (henceforth, KS), that there is a world out there, that there are “rocks”, there is “biology”; that “every cell in my body says XY, XY..., and it’s so irritating that they say XY, XY all the time, because natural females have XX genes and I have XY genes...” (min. 10:22 ff). The question for DMC is, however, *what you do* with the rocks, with biology. “What rocks are to us depends on their use”, and you can use a rock as weapon, as a border, as a garden ornament, as an object of geological study. Similarly, DMC argues, “I’m not a woman, ... you grew up as a girl, I didn’t, ... but of course that’s true of lots of our identities... One is not born as a lawyer, thank God, you have to become one, and you can change from being a lawyer to being in business or being an ice cream salesman or whatever, ... and so, social roles are somewhat flexible, and in a free society, ... and I think Kathleen and I probably agree, in fact I’m sure we do, that in a free society people should be allowed to do lots of things that in traditional societies they’re not allowed to do...” (min. 11:56-13:20).

KS disagrees with the lawyer analogy: “I’m afraid there is a difference between us on that, ... I don’t see womanhood as being like lawyer-hood” (min. 27:11 ff)... The best possible account of womanhood is adult human female-hood... I think the best that I can say is that we can immerse ourselves in a fiction of womanhood, and that’s perfectly appropriate in some contexts ... but I don’t think it’s literally true”. To DMC, “that phrase of yours ... is a very interesting one, “immersive fiction”, and my view is that life is an immersive fiction,... I think psychological and social life is an immersive fiction.” According to KS, in reply, not everything is fiction – there is reality and there is fiction (“there’s some realism and then there’s the fiction...”). Their deep “epistemological” difference is said to remain unresolved (min. 26:30-30:32).

To conclude, while both arguers recognize the existence of reality (rocks, chromosomes), DMC would argue that it is what you do with this given reality that makes you what you are, and everyone should be free to become whatever they wish. One can become a woman by undertaking a number of steps, just like one does to get a qualification for a profession by taking exams. For KS, material reality places limits on what you can do: there are many things you can indeed do with a rock, but also many things you can’t. Women, like rocks, are natural kinds, not cultural constructs.

In recent years, a few scientific journals have popularized social-constructivist, anti-realist views, claiming that science now recognizes the difficulty of defining what a man or woman is. This is because, the argument goes, sex is in not in fact binary, as people have always thought, but exists on a continuous spectrum. In *Nature*, British freelance science journalist Claire Ainsworth (2015) claimed that the notion of sex as binary is “too simplistic”, that scientists have “redefined” sex as involving a “wider spectrum” and have moved “beyond the binary”. An opinion article in *Scientific American* by US anthropologist Agustin Fuentes (2023) also argued against the binary view of sex, though along different lines. The belief that sex is binary allegedly justifies political oppression,

discrimination and bias, and has been used historically to justify slavery and racism, deny the rights of women and, currently, the rights of LGBTQIA+ people.

In response to such articles (authored, however, by people who are not professional biologists), a number of world-renowned evolutionary biologists and geneticists have entered the fray, rebutting them categorically, and positioning themselves on the sex-realist, materialist side. In a nutshell, what they say is invariably as follows. Biological science is clear. Sex is a true binary – male and female. There is no third sex, because there are only two kinds of gametes (reproductive cells): sperm and ova (eggs). An individual's sex is defined by the type of gamete they are genetically programmed to produce (and would produce in normal conditions). Sex is a reproductive strategy: it exists to accomplish a function. Without binary sex, no reproduction and no evolution would be possible. To deny the real and binary nature sex is to deny the facts of reproduction, and also evolution itself (not unlike the denial of evolution by creationists).

Here is Oxford University's Richard Dawkins (2023), in a recent article commissioned by *The New Statesman*:

Some argue that lived experience and personal choice trump biology – but they are wrong... As a biologist, the only strongly discontinuous binary I can think of has weirdly become violently controversial. It is sex: male vs female.... Sex is a true binary... Each body cell of a normal human has 46 chromosomes, 23 from each parent. Among these are two sex chromosomes, called X or Y, one from each parent. Females have two Xs, males one X and one Y. Any mammal with a Y chromosome will develop as a male... (Dawkins, 2023).

And here is American evolutionary geneticist Jerry Coyne, Professor Emeritus at the University of Chicago, on the statement that “Sex in humans is not a discrete and binary distribution of males and females but a spectrum”:

This statement, one of the most common political distortions of biology ..., is wrong... Your biological sex is determined simply by whether your body is designed to make large, immobile gametes (eggs, characterizing females) or very small and mobile gametes (sperm, characterizing males). ... And each gamete is associated with a complex reproductive apparatus that produces it... Because no other types of gametes exist ..., and we see no intermediate gametes, there is no third sex.... (Coyne & Maroja, 2023).

The same facts are stated by American biologist Colin Wright (Wright, 2023a, 2023b, 2023c, 2023d, 2023e, 2023f):

The science is clear: biological sex is not a spectrum... The sexes — male and female — represent two distinct reproductive strategies. (...) Consequently, we distinguish between males and females based on the type of sex cell their primary reproductive anatomy (gonads) can or are expected to produce. This is not unique to humans but is universally applied throughout the animal and plant kingdoms. Since there are only two types of sex cells — sperm and ovum — there exist only two sexes (Wright, 2023f).

All of these professional scientists address the confusion created in the public's understanding of binary sex by the concept of DSD (disorders of sexual development)

and so-called “intersex” conditions. They explain that the frequency of “intersex” conditions was wrongly estimated (by Anne Fausto-Sterling, 1993, 2000) as being at least 1.7% of the population (roughly one in 50 people), but the actual frequency is much lower, about 0.018% (about one in 5500 people (see also Sax, 2002). The inflated figure (which Fausto-Sterling has herself withdrawn in the meantime) results from her putting together many DSDs which are not “intersex”, but affect either men or women (Turner syndrome, XO – always female; Klinefelter syndrome, XXY – always male; and LOCAH – late-onset congenital adrenal hyperplasia, which again has nothing to do with being “intersex”). Seeing as none of these conditions, nor that of being genuinely “intersex”, involve the production of any other gamete than either sperm or eggs, sex is a true binary. That so-called (very rare) intersex conditions exist, as disorders of sexual development, is therefore immaterial to the binary nature of sex (Wright, 2020a, 2020b; Dawkins, 2023; Hilton & Wright, 2024).⁷

According to Wright & Hilton (2020), “biologists and medical professionals need to stand up for the empirical reality of biological sex” and reverse the “dangerous and antiscientific trend” toward its outright denial, supported by the “eccentric academic theory” of gender identity. “The falsehood that sex is rooted in subjective identity instead of objective biology”, they argue, not only betrays the scientific community, but makes women’s sex-based legal protections impossible to enforce, it de-normalizes homosexuality (which is same sex, and not same gender attraction), and is dangerously harmful to children and adolescents. They reiterate the biologists’ view at length in the new Routledge reader on *Sex and Gender* (Hilton & Wright, 2024).

From a Critical Rationalist perspective, both the view that sex is binary and immutable, and the contrary one, that it is a spectrum and can be changed, are of course fallible and revisable. But they are both empirically falsifiable, and so far the former has not been falsified, and has survived criticism to the best of human knowledge. In addition to being in fact corroborated by genetic and any other form of scientific research, the binary nature of sex provides the best explanation available for human reproduction, same sex attraction and the evolution of all species of animals and plants. By contrast, the spectrum view of sex, as a conjecture, fails to explain all of these facts, and cannot therefore replace the theory of binary sex. If the sex-denialist explanation manages to persuade some people at all, it is by focusing on the variability of external bodily characteristics and by completely ignoring reproductive function, the very reason why sexed bodies exist (Hilton & Wright, 2024, p. 27).⁸

5. CONCLUSION

In their introduction to the Routledge reader on *Sex and Gender*, the editors remind us that:

Calls for “no debate” on sex and gender seek to prevent both democratic and scholarly discussions. Yet the open exchange of ideas is essential if we are to develop mutual understanding and work towards solutions to social problems and conflicts of rights (Sullivan & Todd, 2024, p. 3).

⁷ See also Coyne (2022), Hilton (2022a, 2022b), Hooven (2021), Soh (2018, 2020), etc.

⁸ While sex is a true binary, biologists emphasize, human secondary characteristics are of course a spectrum. For example, some men look more stereotypically “masculine” than others, but the latter are no less biologically male for looking more feminine.

In the same spirit, I have tried to describe a fairly radical difference of opinion, asking whether it is indeed a “deep”, hence irresolvable disagreement, given that the two sides do not share the same “framework” propositions. From a Critical Rationalist viewpoint, no disagreement is ultimately irresolvable, if both sides adopt a rational attitude, i.e. if both defer to a methodology of rational criticism, if they will test all claims, as conjectures, by looking at their consequences, in light of the best knowledge at their disposal; if they will answer rational arguments with other rational arguments, trying to learn from each other, and being ready to admit that they may be wrong. While trying to justify a standpoint by argument cannot escape circularity, using arguments as refutations can.

This being said, adults ought to have the right and freedom to make their own lifestyle choices, as long as in doing so they respect the right and freedom of everyone else to do the same. As *Fair Play for Women* (2018) state on their website, “trans rights do not exist in isolation: a fair society balances the rights of all and acknowledges difference”. None of the sex-realist organisations activating in UK are denying the reality of “gender dysphoria” for some people, nor the right of transgender people to live as the opposite sex if they so wish. But the existence of a genuine conflict of rights, between the rights claimed and often assumed (though not in fact legally granted) by transgender activists, and the rights of women and gay people, is now being acknowledged by many left-wing and right-wing politicians in the UK, and the wide public. It is the job of democratic politics, of Parliament (and not of unelected militant organisations) to achieve the most reasonable balance of rights, and make sure that women’s and gay people’s hard-won sex-based rights are not taken away from them, and the protected characteristics of sex and sexual orientation are not undermined.

Whatever policies will emerge will have to be compatible both with the legal framework of universal human rights and with material reality. Theories that have passed the most stringent tests and offer good explanations can give decision-makers the confidence they need when devising policy and taking practical action. Critical Rationalism can offer a methodology and a way forward – a principled way of assessing epistemic and practical claims, and an optimistic outlook on disagreement resolution.

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