The Role of Affective Empathy in Eliminating Discrimination Against Women: a Conceptual Proposition

Michaela Guthridge[1] · Tania Penovic[2] · Maggie Kirkman[3] · Melita J. Giummarra[1]

Abstract

Due to its wide-ranging reservations and lack of effective enforcement mechanisms the *Convention on the Elimination of All Forms of Discrimination Against Women* (CEDAW) has failed to dismantle widespread and systemic discrimination. The present paper proposes a broad, theoretical, preventive and relational approach to creating and enhancing the effectiveness of novel interventions to accelerate gender equality. We describe the main elements of affective empathy (i.e. intersubjectivity, multisensory engagement and empathic embodiment) and identify potential interventions that build on those elements to advance gender equality. We ultimately argue that increased empathy towards women, transwomen and girls is required to disrupt the beliefs and behaviours that lead to discrimination, and that these changes must be enacted alongside legislative reforms and community education that construct equality environments. Our affective empathy framework could have the capacity to operationalise the normative fight against gender stereotypes and inequality in line with article 5(a) of CEDAW.

✉ Melita J. Giummarra
melita.giummarra@monash.edu

1   Central Clinical School, The Alfred Centre, Monash University, 99 Commercial Road, Melbourne, Victoria 3004, Australia

2   Faculty of Law, Deakin University, 221 Burwood Highway, Burwood 3125, Australia

3   Global and Women's Health, School of Public Health and Preventive Medicine, 553 St Kilda Road, Melbourne, Victoria 3004, Australia

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Introduction

In this paper, we aim to describe what we consider to be the main elements of affective empathy and to explore how they could be used to enhance the effectiveness of interventions that advance gender equality in accordance with the *Convention on the Elimination of All Forms of Discrimination Against Women* (CEDAW). It is clear that new approaches are required to accelerate the realisation of women's human rights given that, by current trajectories, it will take 286 years to remove discriminatory laws and close prevailing gaps in legal protections for women and girls (UN Women and DESA 2022). Strategies based on affective empathy (alongside appropriate legal architecture and community education) could help to prevent the relational aspect of discrimination against women in various contexts as a means of realising the goals of CEDAW. In this paper, we articulate our theoretical proposal within the context of CEDAW and the human rights based approach, which includes participation, accountability, transparency and equality. In this context, we suggest affective empathy as a possible complementary vehicle to expedite change because it encompasses processes of intersubjectivity, multisensory engagement and empathic embodiment to enhance affective relations both between individuals and groups within society. We conclude by proposing how affective empathy could be employed in various platforms to influence gender equality on a larger scale. Future empirical research will be needed to demonstrate the effectiveness of these potential interventions, and to identify any further processes needed to optimise the effects on gender equality.

The Social Construction of Gender

The gendered body is a social phenomenon with social implications, governed by social norms (White, 2009). Over time, the social constructs that determine how we perceive others may develop into racist, classist, ableist, ageist, sexist, heterosexist and other discriminatory belief systems. The social constructionism that informs this paper highlights that gender and gender biases are subjective and relative (Lorber et al 1991). Women may experience the construct as social control and oppression. Shotter (1993, p. 96) argues that 'people's beliefs, their identities, and even their minds are continually socially constructed'.

In addition to social constructionism, the arguments presented in this paper are informed by a social science perspective on the neuroscience of empathy as a means of shifting power relations from an individual level to the interactions within whole populations. This may suggest that the neuropsychological processes underpinning empathy and interpersonal relations point towards essentialism. However, our proposal is consistent with social constructionism because the defining characteristic of empathy is that it is co-created among people. Moreover, the empathy-related processes described in this paper—the neurobiological

vehicles for conveying social constructs—are fundamentally plastic and dynamic. What may appear to be dialectically oppositional paradigms can be understood as collaborative.

In this context, gender stereotypes (according to Article 5(a) of CEDAW) are a social construction of the objectification and subordination of women and girls. These stereotypes include the categorisation of women as submissive, nurturing, modest, dutiful, loyal, obedient, chaste, docile, subservient and ultimately as chattels. The goal of modifying gender stereotypes is a profound perceptual change in mindsets that challenges the social construction of women, transwomen and girls.

CEDAW: Defining Equality and Discrimination

CEDAW is the theoretical, normative framework for respecting, protecting, promoting and fulfilling women's human rights internationally (Merry 2011). It came into force after considerable global negotiation and consensus-building by the world's governments and non-government organisations (NGOs). It stands today as the cornerstone legal instrument on gender equality and non-discrimination (Cho 2014). Whilst the Convention defines discrimination against women in Article 1, it does not define gender equality. Rather, the meaning of gender equality is derived from the jurisprudence of the Committee on the Elimination of Discrimination against Women (CEDAW Committee). The Committee has recognised that 'a purely formal legal or programmatic approach is not sufficient to achieve women's *de facto* equality with men, which the Committee interprets as substantive equality', requiring 'an effective strategy aimed at overcoming underrepresentation of women and a redistribution of resources and power between men and women' (General Recommendation 25 [8]).

CEDAW has been described as a 'breathtaking triumph' (Nussbaum 2016, p. 597) and is considered to be a monumental turning point in history through which women's rights were enshrined and supported by international mechanisms. However, it may also be seen as part of an international system that operates in rhetoric and not reality (McQuigg 2007) due to its wide-ranging reservations and lack of effective enforcement mechanisms. Implementation of the CEDAW Committee's General Recommendations (GRs) and Concluding Observations issued under the Convention, and views and inquiries issued under its Optional Protocol (OP CEDAW) are largely reliant on a process of dialogue, persuasion and public shaming; that is, the relational aspects of equality. The implementation of CEDAW can therefore be described as fragmentary because it has failed to dismantle widespread and systemic discrimination. Whilst CEDAW is vital and necessary, it appears to have had little effect on the relational, social and cultural dynamics among individuals, communities and states, which continue to allow discrimination against women and the persistence of gender stereotypes. However, as stated by Bardzell (2016, p. 830):

> True and widespread social change cannot be quickly accomplished through the force of legislation, which is why the ratification of CEDAW is not

intended to implement sweeping legislation with immediate drastic impacts. Ratification of CEDAW is simply the first step in this process.

CEDAW seeks to catalyse social transformation that transcends cursory legislative reform (GR 25). Under article 2 of the Convention, state parties agree to pursue all appropriate means of eliminating discrimination against women, including and extending beyond legislative and constitutional measures to encompass 'all appropriate measures to eliminate discrimination against women by any person, organization or enterprise' (article 2(e)). Such measures include programs that challenge beliefs and attitudes that drive discrimination. In this paper, we argue that the propagation of affective empathy towards women, transwomen and girls could play a significant role in achieving such transformative change. Transformative equality (Cusack and Pusey 2013) is based on the need for structural reform, which is needed to achieve substantive equality, including the elimination of gender-based prejudices and stereotypes required by article 5(a) of CEDAW. Hellum and Aasen (2013, p. 122) argue that article 5(a) makes CEDAW a 'revolutionary instrument' that addresses the root cause of discrimination against women. Therefore, work that modifies stereotypes has the capacity to catalyse a feminist revolution.

Realising the Transformative Potential of Article 5(a) of CEDAW

Whilst we cannot legislate against beliefs (either empathic beliefs or beliefs grounded in stereotyping) that do not manifest as unlawful behaviour, we can elicit such changes through community education and awareness raising. As the gap between tolerance for stereotypical beliefs and intolerance for stereotypical behaviours dampens the transformative potential of article 5(a) of CEDAW (Kertcher and Turin 2023), we may well question whether gender stereotyping falls within the ambit of justiciability and whether empathy can ameliorate its harmful effects. To answer this question we must first consider the jurisprudence of CEDAW.

Articles 2(f), 5(a) and 10(c) of CEDAW require state parties to modify (rather than eliminate) gender stereotypes, with article 2(f) focusing on laws and article 10(c) focusing on education. In its views issued under OP CEDAW, the CEDAW Committee has called on states to eliminate gender-based stereotypes that perpetuate inequality. In *L.C. v Peru*, the Committee found that the State Party violated article 5 in its actions with respect to a 13-year-old girl who was raped and impregnated, and had attempted suicide as a result. The refusal of L.C.'s request for an abortion and the denial of timely spinal surgery (needed following L.C's suicide attempt to avoid permanent disability) were based on stereotyping with respect to women's reproductive capacity, 'fulfil[ing] the stereotype of placing L.C.'s reproductive function above her right to health, life and a life of dignity' (para. 8.10).

In the matter of *Vertido v The Philippines*, the Committee examined gender-based stereotypes in the legal system. The author of the communication, Karen Tayag Vertido, claimed to be a victim of discrimination in the context of legal proceedings which led to the acquittal of a former senior co-worker charged with raping her. The Committee found that Vertido was revictimised and discriminated

against in the rape proceedings which relied on a series of gender-based myths and stereotypes, including the assumption that a lack of resistance to the assault signified consent. The Committee stated:

> Stereotyping affects women's right to a fair and just trial and that the judiciary must take caution not to create inflexible standards of what women or girls should be or what they should have done when confronted with a situation of rape based merely on preconceived notions of what defines a rape victim or a victim of gender-based violence, in general (para.8.4).

This gender stereotyping in the legal process was found to be in breach of article 5(a) and the Committee called on the Philippines to ensure that all legal procedures in cases involving crimes of rape and other sexual offences are not affected by prejudices or gender stereotypes (para. 8.9(b)). The Committee's findings in *L.C v Peru* and *Vertido v The Philippines* demonstrate that CEDAW is not merely an aspirational document when it comes to gender stereotyping. However, we can be sure that the CEDAW Committee would not have found in the authors' favour if the stereotyped beliefs had not materialised into discriminatory behaviours.

Whilst law, education and the media have transformative potential in delegitimatising and dismantling harmful gender stereotypes, they are but a 'finger in the dyke' against widespread gender prejudices (O'Rourke 2019) (manifested, for example, in the misogyny which pervades social media). Despite the fact that the operationalisation of article 5(a) remains poor, we should not underestimate its transformative power and potential if we tackle stereotypes with empathy-based interventions.

The Role of the Neuroscience of Empathy in Terms of Article 5(a) of CEDAW

Whilst CEDAW provides a non-exhaustive agenda for eliminating discrimination against women (and calls for 'all appropriate measures' to be enacted to achieve this aim), it does not explicitly contemplate responses based on a neuroscientific understanding of stereotypes. Nevertheless, stereotyping is a function of the brain (Amodio 2014), and we propose that stereotypes may be combatted by interventions steeped in neuroscientific knowledge, including the neuroscience of empathy. That is to say, to be compliant with CEDAW we must target the root causes of the psychological construct that manifests as inequality and discrimination. To this claim, the CEDAW Committee has stated:

> The position of women will not be improved as long as the underlying causes of discrimination against women, and of their inequality, are not effectively addressed. The lives of women and men must be considered in a contextual way, and measures adopted towards a real transformation of opportunities, institutions and systems so that they are no longer grounded in historically determined male paradigms of power and life patterns (GR 25 [10]).

The CEDAW Committee found in *L.C.* and *Vertido* that modifying harmful stereotypes is central to eliminating discrimination against women (Cheah 2021). In practice, the CEDAW Committee consistently calls on state parties to adopt measures to address gendered stereotypes through the periodic review process under article 18(1) of the Convention. In this respect, the CEDAW Committee is a 'norm keeper' (Kertcher and Turin 2023, p. 219). The operationalisation of norms is essential to any rights realisation (Stewart et al. 2021). But in order to achieve this transformative attitudinal change called for by CEDAW, we must be open to new strategies for eliminating gender stereotypes.

Many strategies have been employed to combat inequality and discrimination against women, including gender-blind techniques, awareness raising, litigation, judicial remedies, local and global advocacy, campaigning, lobbying, strikes, protests, petitions, boycotts, sanctions, art and social media activism, gendered budgets and gender mainstreaming. Traditional strategies for overcoming gender inequality have generally focused on increasing knowledge or awareness rather than on changing relational aspects such as experience or behaviour. Compulsory diversity training is often ineffective, can result in backlash and has shown only modest to weak impacts on gender-based discrimination (Jackson et al. 2014). Indeed, fact-driven presentations that cite statistics can have the unintended effect of normalising discriminatory behaviour or causing cognitive dissonance (Pease 2004-2005). Although reductions in implicit or unconscious biases through training have been found to be short-lived (Devine et al. 2012), the effectiveness of these programs has not been adequately evaluated (Williamson and Foley 2018).

Whilst the myriad strategies cited above continue to have a valid place in advocacy efforts, there is a need to explore novel approaches given the limited efficacy of methods used to date (Guthridge et al. 2022). With this in mind, we recognise that it is one step for a state party to enshrine anti-discrimination provisions in legislation or its national constitution, and another to transform the constructs that dictate relational beliefs and behaviours among duty-bearers and rights-holders. Whilst ingrained beliefs and behaviours can be moderated by knowledge or memory, we argue that they may be more effectively mediated by affective empathy because of the predictive prosocial outcomes it can generate, which can be absent when simply learning about women's human rights. In this respect, we argue that whilst article 10(c) calls for the elimination of stereotypes in education, the most effective medium for eliminating stereotypes may not be education itself. To combat harmful stereotypes we may need to strengthen our empathic skills.

Whilst using empathy to advance equality is not a novel idea in feminist theory (Pedwell 2012), in a recent systematic review, Guthridge et al. (2022) found that very few interventions that sought to promote gender equality actually used empathy as a vehicle for change. Furthermore, those interventions that did integrate elements of empathy failed to explain *how* they used and measured it, reducing the multidimensional concept to one dimension. Those studies that did recognise the multidimensionality of empathy generally focused on cognitive empathy. For example, Lu and McKeown (2018) found that perspective-taking predicted altruistic compensation in the context of distributive gender inequality in a Dictator Game; Moss-Racusin et al. (2018) found that a video intervention advocating diversity in

STEM increased cognitive empathy and reduced gender bias; and Zawadzki et al. (2014) participants in an experiential 'game play' reported less sexist beliefs and more empathy after the intervention. What these studies do not say, however, is that increased empathy *caused* a decrease in gender bias, but they do establish that there is a relationship between empathy and reduced gender bias. Therefore to fill this gap in literature, we explore the effects of employing affective empathy as a vehicle of social change in relation to gender equality and non-discrimination against women.

Defining Empathy

Empathy has been examined from multiple perspectives, from evolutionary, psychological, neuroscientific and morality standpoints, to political, economic and cultural views (Guthridge et al., 2020). The conceptual diversity in definitions of empathy has resulted in the absence of a clearly defined construct, causing much confusion as to what empathy actually is. Guthridge and Giummarra (2021) derived a definition of empathy from a rigorous content analysis of definitions ($n = 146$) found in a comprehensive literature search. They concluded that empathy is 'the ability to experience affective and cognitive states of another person, whilst maintaining a distinct self, in order to understand the other'. This is consistent with the understanding that empathy includes at least two key dimensions: cognition and affect (Decety 2011). If cognitive empathy can be conceptualised as 'I understand how you feel', affective empathy is conceptualised as 'I feel what you feel' (Hein and Singer 2008). Whilst these two dimensions use different brain regions (the mirror neuron system for affective empathy, and at least five brain regions for cognitive empathy) (Yu and Chou 2018), the two dimensions are not completely independent (Cuff et al. 2016). Rather, the processes work both independently *and* interdependently (Lumma et al. 2020). Whilst we can say that empathy is a multilayered, interconnected neuropsychological process, we do not yet fully understand the mechanisms *linking* cognitive and affective empathy. Yu and Chou (2018) proposed a dual route model of empathy in which the automatic, fast and specific 'lower route' of affective empathy is integrated with a complex, controlled, slow and iterative 'higher route' of cognitive empathy. Understanding the connectivity of these two dimensions is important because, on the one hand, empathic perception can lead to prosocial behaviours such as the equal treatment of women, transwomen and girls. On the other hand, empathy deficits can result in behaviours that can adversely affect women and girls, such as in psychopathy (a deficit in affective empathy but not cognitive empathy) and autism (a deficit in cognitive empathy but not affective empathy) (Cuff et al. 2016).

We experience cognitive empathy subjectively: we attempt to understand others through understanding ourselves (Rameson and Lieberman 2009). In the present paper we argue that there is great danger in emphasising cognitive empathy to achieve gender equality because one person's understanding does not equate with that of another's. To take the empathy metaphor of stepping into another's shoes, in cognitive empathy we know only what *we* would experience if we were in another's shoes. Their shoes may be a perfect fit for us, but abrasive and uncomfortable for

others. And, regardless of the fit, they may be unsuitable for the surrounding terrain. In the case of gender equality, a cisgender man has no point of reference from which to imagine what it is to be a woman, just as a white person has no point of reference for knowing what it means to be Black. We can connect only through our common humanity.

Affective empathy, which is defined as 'one's emotional, sensorimotor, and visceral response to the affective state of other (*sic*)' (Yu and Chou 2018, p. 2) is the interpretation of another person's experiences and feelings by mirroring what another is feeling (Yalçın and DiPaola 2020). There is evidence to suggest that the same neural regions and networks that are active when experiencing a particular emotion or executing an action are also active when observing that emotion or action in another person (Gallese 2001; Olson 2013), which may contribute to understanding what another is feeling. These mirror mechanisms are considered to be 'a radical redefinition of what it means to be human: the boundaries of the self extend far beyond our skin and bone physicality' (Krznaric 2014, p. 96). Mirror mechanisms are therefore critical in breaking down the distance between you and me and between the potential social divides of them and us (Rizzolatti 2005).

A Proposal for a New Strategy

The limited progress in eliminating discrimination and achieving gender equality signals the need to consider alternative approaches that buttress existing legal architecture and that acknowledge the social construction of gendered bodies. As Pedwell (2012, p. 166) contends, 'it is the radically "unsettling" affective experience of empathy that is conceived as potentially generative of both personal and social change'. In the present paper, we argue that empathy, especially affective empathy, has the potential to advance gender equality alongside existing strategies.

Each element of affective empathy that we have identified from literature on empathy is grounded in the neuroscience of empathy, but is conceptualised here in a new light. Key existing models of empathy that have informed our argument include the perception-action model (Preston and de Waal 2002, p. 1), where 'the perception of an object's state activates the subject's corresponding representations, which in turn activate somatic and autonomic responses' ; second, the empathy-attitude-action model (Batson et al. 2002) emphasises that attitudes do not always lead to attitude-consistent behaviour, but empathy affects actions as well as attitudes; and finally, the empathy-altruism hypothesis (Batson et al. 2015) argues that empathic concern produces altruistic motivation, although we suggest this is limited by the self-orientation serving to reduce personal distress. Building on these models, we argue that three interrelated dimensions of affective empathy could be applied to catalyse the relational aspect of gender equality and non-discrimination. These dimensions, depicted in Fig. 1, are 'intersubjectivity' as the link between Self and Other, 'multisensory engagement' as a process that heightens affective immersion and experience, and 'empathic embodiment' as the outcome. We summarise and discuss each element in turn, noting that they are fundamentally fluid and not fully discrete.
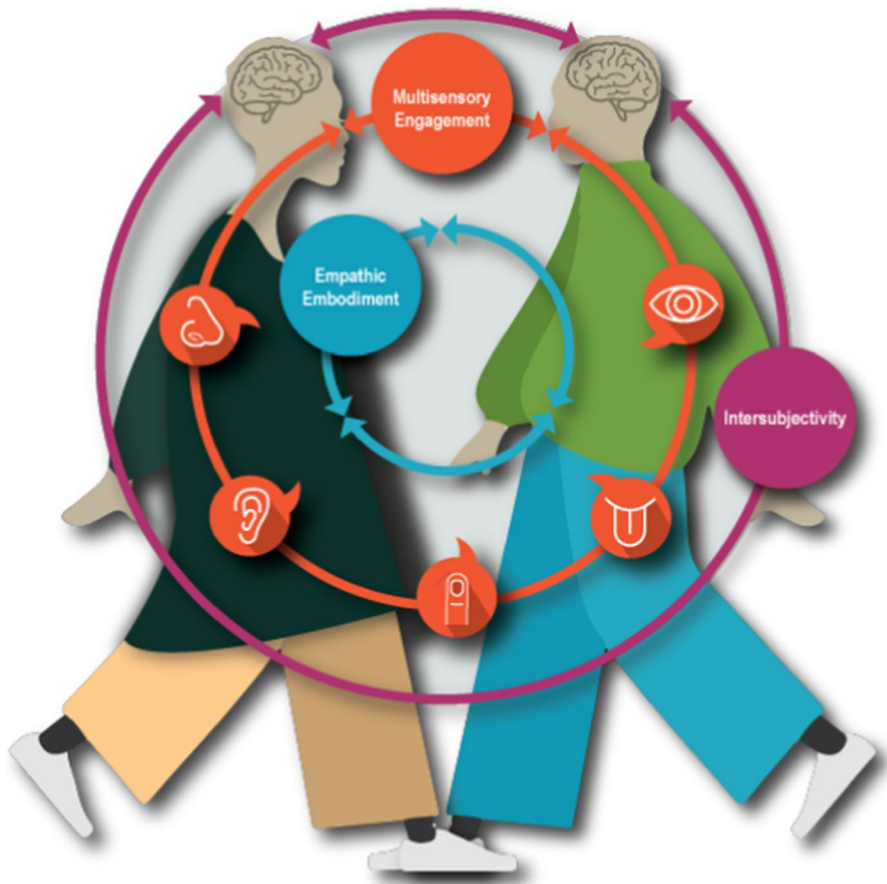
Fig. 1 Intersubjectivity, multisensory engagement and empathic embodiment in motion

Intersubjectivity

It seems serendipitous that the words empathy and intersubjectivity both came into being in the same year: 1908. Xie (2020, p. 91) defines intersubjectivity as the 'continuous alter-centric participation in human communications', whilst Cipolletta et al. (2022, p. 904) state that intersubjectivity 'consists of the mutual coordination, incorporation and sharing of meaning and experience between people over time'. As a strongly relational system, intersubjectivity is symbiotic (Ho et al. 2020) and a dialectical relationship-building process (Xie 2020). Pawlett-Jackson (2022) argues that intersubjectivity can be experienced beyond the dyad to include multi-person intersubjectivity.

Intersubjectivity begins at birth (Trevarthen and Aitken 2001) and focuses not on two people but rather on the relationship between them, in the shared third space (Michael 2014). Lux and Weigal (2017) illustrate this through the example of the joy

experienced by a parent and child playing together. This joy is not divided between them, but arises from the shared situation in which both are immersed. Intersubjectivity does not denote mere imitation by a detached observer in a static environment (Lux and Weigal 2017). It is a dynamic interaction that is goal-oriented and context-dependent, entailing a rapid-fire interplay of catching each other's states and responding to each other's needs based on mutual understanding (Ferrari 2014). In intersubjectivity a 'call and response' dynamic is intrinsic, transcending temporal limitations of the human rights system. Intersubjectivity is important because through practice it may become a more natural part of interpersonal relations with outgroup members such as women, transwomen and girls. In this way, equality is not a static endgame resolved entirely by legal adjudication.

Intersubjectivity is a bidirectional phenomenon (Stel and Vonk 2010), applied as 'I will help you because you are me' (Thomas et al. 2009, p. 321). However, whilst it is important to identify our common humanity, true empathy is to understand and feel for another person irrespective of identified similarities or differences. Intersubjectivity differs from the human rights-based approach, which is a methodological framework operationalised by four core principles of participation and inclusion, accountability and the rule of law, openness and transparency, and equality and non-discrimination (Tengnäs 2012). Intersubjectivity ensures the call for participation is meaningful.

In a human rights-based approach, the conferral of rights is commonly unidirectional from the duty-bearer to the rights-holder. This approach calls for inclusion or participation without demanding dialogue or sharing (Powell et al. 2005) that often results in tokenistic participation. Simply being included in the existing discriminatory structures, such as patriarchy or neoliberalism, will not lead to equality because these structures are inherently unequal. New systems are needed to replace patriarchy and neoliberalism, otherwise women who do not conform with gender norms grounded in patriarchy will continue to be excluded from dominant discourses. Intersubjectivity, through its persuasive power dispersed among equals, could shift this paradigm and reduce exploitation of inequalities that cause harm to women, transwomen and girls beyond legal environments. Intersubjectivity in this democratic space eliminates 'them' and reveals 'us' (Hurdley and Dicks 2011). In this respect, intersubjectivity has the power to transform relationships and is therefore fundamental to social change (Martinez 2016).

The purpose of intersubjectivity in our proposed framework is to attain equality. Equality is not a singular act performed by an individual, but a perpetual negotiation among the masses. We need encounters with others to recognise and enforce moral responsibilities, including fairness and equality (Pawlett-Jackson 2022). But equality does not occur merely when reciprocation exists, but when the reciprocation is co-regulated (Xavier et al. 2016). Whilst power must be shared, we argue that it is achieved via co-regulation in the intersubjective process. The quality of co-regulation, however, can be affected by attachment styles (Behrends et al. 2012).

Sheng and Han (2012) provide evidence that intersubjectivity can decrease bias and expand our scope for empathy. They investigated whether including other-race members in one's own team for an oppositional game can increase empathic neural responses to their same-race faces. The manipulation of intergroup relationships

increased empathic neural responses to other-race faces, but did not affect empathic neural responses to same-race faces. These findings demonstrated that racial bias (and perhaps by extension gender bias) is not inevitable and that manipulations of intersubjectivity can reduce prejudice.

Curran and Chuang (2022) consider the effect of social distancing (due to the COVID-19 pandemic) as artificial intersubjectivity compared to rich, complex and free-flowing in-person interactions. In this study, Curran and Chuang (2022, p. 1) investigated social biosensing as interpersonal sharing of physiological information. In this case, electrodermal activity was extracted and displayed on a computer as a means to facilitate intersubjectivity from a distance. The researchers found an element of 'neuroenchantment' (p. 6) with social biosensing as participants regarded the technology as accurate and authoritative in respect to complex inner emotions. Ultimately, they found that social biosensing had a powerful effect on intersubjectivity, which suggests that empathic experiences do not have to be in-person to be effective.

Multisensory Engagement

The second element in our framework of affective empathy (Fig. 1) is that advocacy strategies must employ multisensory experiences. A multisensory experience is the perception of two or more of the five primary senses of sight, hearing, touch, taste and smell. Multisensory engagement can amplify a range of processes. From learning experiences to changes in body representations, multisensory engagement can lead to social change, including actions that reduce discrimination (Farmer and Maister 2017), and can help hone our empathy skills (Konrath et al. 2015). Therefore, to enhance the impact of empathy on gender equality, strategies should incorporate stimuli and processes that engage more than one sense.

We are connected to the external world by the senses, and these senses have been shown to moderate our empathic experiences (Morrison et al. 2004). When we read about gender-based discrimination, we lack sensory signals such as tone of voice or body language to support our understanding. However, sensory information derived from sights, sounds and sensations is processed by converting an observed situation or experience into a motor format to enable us to feel what another is feeling, and ultimately to anticipate the other person's behaviour in order to generate an appropriate motor and social response in the observer (Fabbri-Destro and Rizzolatti 2008).

It is not known whether affective empathy engages all senses in similar or different ways, or whether some senses are more powerful than others. However, it is generally recognised that visual stimuli engaged through direct eye gaze triggers empathy more easily than other senses because eye contact signals communicative intent, especially in pre-linguistic communication (Schulte-Rüther et al. 2007). Furthermore, visual input can alter the other senses (Prochazkova and Kret 2017). It has been found that even congenitally blind individuals mimic smiles heard in speech, despite having never seen a facial expression (Arias et al. 2021; Valente et al. 2018). Overall, these studies indicate that mimicry does not require visual learning per se,

but that empathic processes may be enhanced by visual input, hence their importance in our proposed framework.

Touch has been found to be a crucial psychophysiological element in the genesis of intersubjectivity (Di Plinio et al. 2022, p. 102), and people with higher tactile sensitivity are also more empathic to the sensations of others (Schaefer et al. 2022). Di Plinio et al. (2022) found that aberrant social-affective touch experiences appear to be associated with attachment abnormalities, interpersonal trauma and personality disorders.

Based on the reviewed literature, there are examples of incorporating sensorimotor exercises into empathy-equality interventions (Schaefer et al. 2022). Jaffe et al. (2020) examined the impact of a sense disruption intervention that focused on the politics of sensations in urban slum 'sensorium' tours that allow tourists to feel empathy in a visceral micro-political way. In these tours, 'bad' areas and their residents were recognised by offensive sights, smells and sounds; a sensory 'attack' that intimidated and excluded. This type of multisensory engagement might give rise to affective responses in a full bodied experience, but was found to not instil equality between the tourists and the 'slum dwellers'. This calls into question the use of multisensory engagement to achieve equality, and leads one to consider whether we can (or should) empathise with parochialisms; in this case, a tour edited to have maximum intensity of a sensorial immersion intended for tourists to 'know' what poverty feels like. The authors of the study concluded that these types of tours can 'reiterate boundaries and hierarchies, reinforcing pre-existing notions of difference and distance through sensations such as disgust and fear' (Jaffe et al., 2020, p. 1028), and can be classified as poverty porn. It would seem that, if multisensory engagement is employed *without* intersubjectivity (witnessing without interacting), prosocial empathy cannot arise and equality may be suppressed. Evidence suggests that it is only when a multisensory experience is embodied through intersubjectivity that We (as an egalitarian community) exist.

Whilst there is no equivalent to multisensory processing in a human rights-based approach, we propose that multisensory engagement could contribute to an enabling experience within social constructionism that could advance the principles of CEDAW.

Empathic Embodiment

The final dimension of affective empathy that we have identified is empathic embodiment (Fig. 1), the subjectively embodied experience of others. Empathic embodiment has also been referred to as inhabiting, mimicry, mimesis, simulation, resonance, attunement, vicarious or synaesthetic experience, adaptive synchronicity, synchronisation and neurological echo (Gerdes et al. 2010). It primarily encompasses mirroring of postures, intonations, gestures, facial expressions and even moods, emotions and sensations from an empathic base (Tanner et al. 2008). Mirroring activates neurological processes associated with affective empathy and results in, for example, smiling when another smiles, laughing together with others, crying at another's tears, grimacing when another expresses pain, or yawning when another yawns (Dossey 2010; Fischer

et al. 2012; Franzen et al. 2018; Giummarra and Bradshaw, 2009). Empathic embodiment is the moment we 'become one' with another or, at the least, very close. In this way, rather than simply saying 'I know how you feel', we actually show another that we understand how they feel by mirroring their facial or bodily expressions. We contend that, if empathy is to be in someone else's shoes, empathic embodiment is to be in step with another's gait.

Given that conscious mirroring and imitation can also be used to mock or bully (Walsh et al. 2018) (e.g. 'black face'), those intentionally using empathic embodiment should be vigilant against perpetuating harmful stereotypes (article 5(a), CEDAW). It is also important to note that embodiment is an *internal* experience. External experiences, such as wearing a hijab for a day, are not examples of empathic embodiment. Furthermore, there may be cultural, physical or psychological reasons why one cannot look into another's eyes and mirror their facial and bodily expressions. We must guard against being pejorative or prejudiced and avoid resorting to 'white saviour' mentality or the 'male gaze'. These examples can rightfully be viewed as offensive and fetishising the exotic. Empathic embodiment is about celebrating a glimpse into another's internal experience, recognising that full access into the other is not possible. In this respect, the extent to which we mimic outgroups is inversely related to our implicit prejudice (Farmer and Maister 2017).

Whilst lack of mirroring can exacerbate existing power imbalances between parties (Kulesza et al. 2014), we contend that empathic embodiment minimises imbalance because it creates an equilibrium between parties through an osmosis of emotions and sensations. Mirroring in this sense challenges existing power and control dynamics, which are among the root causes of discrimination against women. This is critical to our proposal, and consistent with the suggestion by Farmer and Maister (2017) that we can change social attitudes simply by synchronising our movements with others who are unlike us. Further to visual synchronicity, vocal synchronicity can positively unite a team and prime shared prosocial beliefs and behaviours. For example, crowds at sporting events, religious gatherings and political rallies all use vocal synchronicity to reinforce a sense of community or solidarity for a cause.

Mimicking, as compared to passive observing, has the power to influence empathy and equality. For instance, in a study by Inzlicht et al. (2012), non-Black participants were instructed to mirror or passively observe Black or non-Black actors depicted in a video drinking a glass of water. They found that mirroring the Black actors reduced prejudice more than passive observation. Similarly, in another study by Vanman (2016), participants watched a video of a woman who occasionally scratched her face. It was found that people who shared the woman's religious beliefs were more likely to imitate the scratching than those who did not share her beliefs, indicating that passive observation is not sufficient to overcome ingroup bias. Farmer et al. (2014) conducted an experiment in which a sense of ownership over a dark-skinned rubber hand was induced through synchronous sensory stimulation of the rubber hand and the research participants' hand. They found that embodiment of the dark-skinned rubber hand reduced implicit biases against dark-skinned people measured by an Implicit Association Test. However, it must be noted that people who experience vicarious pain do not automatically mirror respiratory patterns observed

in film clips (Young et al. 2017). Furthermore, McGarry and Russo (2011) go so far as to contend that mirroring practice could be employed as a therapy, in which practising mirroring others could have rich and extensive applications for empathy enhancement. Whilst these experiments do not test gender bias, they do demonstrate that changes in representations of self versus other can decrease outgroup biases.

Galani et al. (2020, p. 307) explored empathic embodiment in a museum exhibition in which a visitor was invited to sit in front of a black box containing a two-way mirror displaying the words 'Sit with Me'. A hidden Microsoft Kinect camera detected when a visitor sat at the exhibit, and displayed a life-sized image of a historic migrant to the area on the screen of the mirror. A face recognition algorithm then animated the migrant so that they aligned with the reflection of the visitor giving the impression that their reflection had blended with the migrant. Empathic embodiment in this example is fostered through an encounter between Self and Other, where both individual and collective identities interrelate and cannot exist independently. Modern museums use advanced experiential digital media, such as immersive reality technology, robots and chatbots to deliver different perspectives that resonate emotionally with visitors. Here, subjectivity is re-assembled and curated with eye-to-eye encounters of historic figures, creating a personal connection between visitor and exhibited subject. In this context, the experience of embodiment humanises the Other through a process of actively facing a subject, creating an affinity with the Other through reflection. We submit that this process could break down the division between groups, such as gender groups, although this was not tested.

Empathic embodiment changes us through equal, primitive and pre-linguistic bodily expressions, but it cannot in the moment directly change the circumstances of the person whose human rights have been denied without subsequent action. For example, empathic embodiment between a person experiencing homelessness and a home owner could radically change the dynamic of their relationship that inspires change, but it would not directly provide a safe home to the person experiencing homelessness without concomitant prosocial actions. Furthermore, whilst empathic embodiment may lead to helping behaviours (Batson, 2010), systemic change occurs when those helping behaviours spread across populations. That is to say, empathy does not only exist in individual, independent bodies. According Pawlett-Jackson (2021), equality exists in the *gestalt* of collective embodiment. In this respect, we are interdependent.

Boduszek et al. (2019) demonstrated that repeated practice of prosocial actions can be translated into long-term effects, including changes in beliefs, attitudes, emotional responses, empathy and personality structures. Put more simply: 'we become what we practise being' (West and Zimmerman 1987, p. 146). However, the Proteus effect suggests that embodying outgroups could activate (rather than ameliorate) associated stereotypes (Bertrand et al. 2018). Clearly, more research is needed to clarify these contradictions and to develop a deeper understanding of the advantages and disadvantages of empathic embodiment.

General Discussion, Implications, and Future Directions

In this paper, we proposed that the concurrent application of three elements of affective empathy, alongside or within existing strategies, could contribute to reducing gender inequality or preventing gender-based discrimination through processes of humanisation and re-socialisation. We do not argue that affective empathy will be an effective or transformative strategy to combat *existing* discriminatory acts, which should be addressed through the justice system. Rather, we propose that enhancing affective empathy when designing and implementing new strategies may create the social change required to *prevent* behavioural manifestations of gender bias, such as stereotyping.

Potential, age-stratified applications of our proposition are shown in Table 1. The minimal commitment, motivation and effort required to 'nudge' (Lehner et al. 2016) affective empathy may be leveraged via the brain's reward system. Detailed analysis of these proposed interventions awaits further empirical research (which we plan to undertake). Notably, we do not propose a one-size-fits-all approach. Rather we suggest flexible and adaptable application of the different dimensions of affective empathy to diverse genders, ages, abilities and cultural contexts. Although we advocate that affective empathy should be encouraged and applied throughout a life span (see Table 1), the foregoing examples demonstrate that intersubjectivity, multisensory engagement and empathic embodiment are suitable for children as future generations of feminists. This is important because very few interventions by NGOs target the beliefs, attitudes and behaviours of children younger than 12 years of age, a critical time when biases and stereotypes are reinforced (Sierksma et al. 2015). Attempts to undo learnt stereotypical behaviours can be ineffective (Falbén et al. 2019). It is perverse and probably futile to allow harmful stereotypes to form and then reactively attempt to redress them through law reform or community education directed at teenagers and adults. However, concurrent social change in adults is needed to enable children to maintain this socio-emotional growth.

We illustrate in Fig. 2 the process whereby we could intervene with affective empathy before and after stereotypes emerge. Whilst there is no question that interventions can target moderation of existing beliefs through cognitive control and emotional regulation, it remains to be seen whether we can have an effect *before* the belief is formed or recalled.

When considering article 5(a) of CEDAW, we acknowledge that we all construct stereotypes together through a wide range of social categories from a young age, and that stereotyping is reinforced throughout life (Quadflieg and Macrae 2011). A mere glance at another is sufficient to assess a plethora of social inferences, including discriminatory inferences about another person (Lehmann et al. 2022). Stereotyped beliefs can occur within milliseconds of behaviour, but we can engage in self-regulatory processes that mitigate these effects (Amodio and Devine 2006). When a stereotype is entrenched it becomes activated automatically (Falbén et al. 2019). Amodio (2014) suggests that over time, control-driven changes in behaviour can become habitual and can consequently strengthen positive associations of women, transwomen and girls in the mind.

Table 1 Suggestions for interventions based on empathy development across time

| Age range	Empathy and social mimicry development	Potential intervention
0–2 years	• Self-other distinction • Capacity to imitate • Imitates fear, sadness and surprise • Pupil mimicry	Greater encouragement by post-natal care workers via public health campaigns to encourage mother-infant mirroring to generate intersubjectivity
1–2 years	• Develops empathic concern • Reduce peer's distress • Develops perspective taking and prosocial behaviours	A toy, such as a doll/teddy, that is capable of different facial expressions (either manually or robotically) that a child can learn to match
2–3 years	• Imagine other's perspective	A national children's television program to engage children in 2 min of daily practice of mirroring through play
5–7 years	• Develops group identity and predicts other's behaviour	Integration into existing kids' clubs social challenges to develop skills based on intersubjectivity, multisensory engagement and empathic embodiment
8–10 year	• Empathic abilities mature	Establishment of an international museum of equality that incorporates empathic, interactive and multisensory messaging, where visiting is a component of school curricula
10–99+years	• Moral reasoning develops	Gamification of electronic flashcards depicting universal emotions into a smartphone application, virtual reality game or TikTok challenge
13–99+years	• Trait empathy is stable	Gamification detailed above to be converted into national fundraising challenges for women's equality
18–99+years	• Trait empathy is stable	Adaptation of Zawadzki et al. (2012) Workshop Activity for Gender Equity Simulation—Academic version board game to incorporate elements of affective empathy
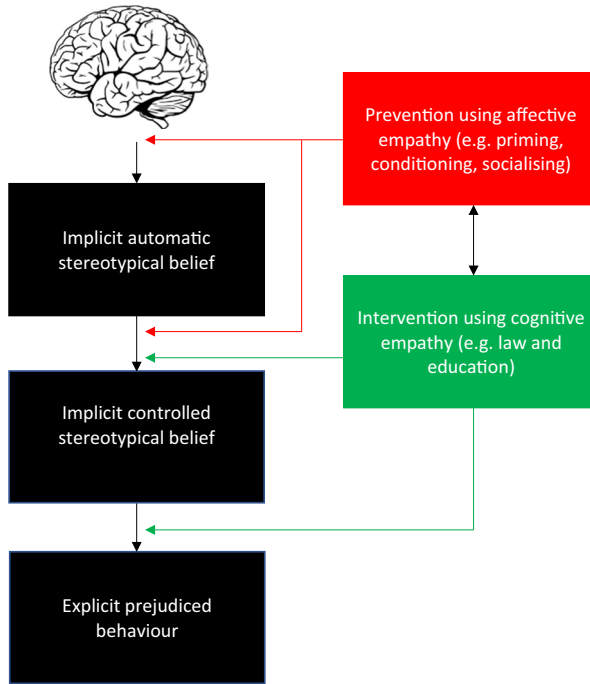
Fig. 2 The process from stereotypical beliefs to prejudiced behaviour based on Amodio (2014), alongside proposed interventions

Although Lumma et al. (2020) question whether we can control the expression of empathy, we suggest that just as we continue to breathe both without conscious thought and also with intention, so too empathy is dialectically automatic and deliberate. To this Nebbiosi and Federici (2022) add that imitation is not something we do occasionally, but constantly. Furthermore, Quadflieg et al. (2009) state that people who hold egalitarian views (compared to people who hold prejudiced views) are less likely to activate harmful stereotypical beliefs. However, there has yet to be a strategic framework that adequately addresses stereotypes according to article 5(a) of CEDAW via the neuroscience of affective empathy.

Our framework of affective empathy is worthy of empirical validation to assess its capacity to operationalise the normative fight against discrimination and stereotypes according to CEDAW. Whilst the neuroscientific understanding of stereotypes and discrimination emerged long after the drafting of CEDAW, it now offers new insights into how we can overcome discrimination against women, transwomen and girls. This knowledge opens up a realm of possibilities that represents uncharted waters for women's rights advocates and activists, and a suitable strategic choice for advancement of the principles of CEDAW.

Caveats and Opportunities

We acknowledge that affective empathy will not be a cure-all for gender inequality and discrimination. As Batson (2010) rightly points out, something more than automatic mimicry must be involved in order to select actions to mimic. He provides evidence to demonstrate that we also use memory and knowledge to decipher what others think and feel. In this context, it is important to note that sometimes people fail to feel or express empathy simply because empathy is complex (Burgmer et al. 2021). You do not have to be a narcissist or a psychopath to be unempathic. And injustice does not produce a singular and predictable empathic response. In Gubler et al. (2022, p. 2156) study, humanising media messages designed to invoke affective empathy produced little change in 'policy attitudes'. Those who already had high trait empathy showed the largest increase in empathy, and cognitive dissonance was an important mechanism driving the differential between high and low empathy. The findings from Gubler et al.'s study demonstrated that changing hearts using empathy was a difficult task, which meant changing minds remained elusive.

It is not clear whether embedding affective empathy in critical pedagogies will help to dismantle, to any extent, the androcentric neoliberalism or neocolonialism that exacerbate inequalities. However, as neoliberalism and neocolonialism do not prescribe reciprocity, they are not empathic systems. Critical pedagogies that account for affect in gender transformative work are essential because the emotional dimension of teaching social justice is foundational to overcoming oppression (Freire 2000). In this context, pedagogies that account for vulnerability are imperative. Although there may be resistance or even backlash at leveraging affective empathy to combat discrimination, we argue the non-threatening way this idea can be employed (as illustrated in Table 1) sets the scene for a productive experience for all.

Finally, we proffer the ultimate unanswerable paradox in relation to empathy: that we can never really know if our experience of another's experience is authentic, or if it is just a projection of what we wish, desire or assume about the Other. Empathy can be the genesis of equality, with insight being the *raison d'etre* of empathy. In this respect, strategic empathy is a valuable tool that can open up affective spaces (Keddie 2020) as 'empathy bridges gaps between individual psychological experience, embodied interpersonal emotionality, and our collective social moral order' (Wharne 2021, p. 1),

Conclusion

In this paper, we aimed to present a theory that describes the substrates of affective empathy (intersubjectivity, multisensory engagement and empathic embodiment), and to propose new ways that they could be used for the advancement of gender equality. Historically, the effectiveness of CEDAW has been wholly

dependent on political will. Nevertheless, in order to disrupt patriarchal structures and initiate transformative equality, we propose that significant shifts in thinking and action are required, and that affective empathy may have a ripple effect that contributes to this shift. We do not propose that our approach should replace the human rights-based approach. Rather, we argue that it offers a social constructionist perspective, and highlights the evidence that affective empathy has neurological substrates that can be used to develop interventions. These interventions must work alongside law and policy reform to accelerate the achievement of the goals of CEDAW, especially article 5(a).

Equality for women, transwomen and girls remains a radical concept even after 40 years of CEDAW, and therefore requires radical approaches to expedite its fulfilment. Transforming harmful belief systems underpins CEDAW's equality paradigm. However, the promise of *de jure* and *de facto* equality cannot be fulfilled by law alone (Raday 2012). Our proposed preventative-conciliatory approach using affective empathy, rather than a post hoc adversarial approach, may help to further translate the principles of CEDAW into practice, including article 5(a), and to reconfigure, to some extent, social dynamics that cultivate inequality and discrimination against women. Ultimately, it is true to say that 'our political revolutions will not succeed unless they are accompanied by revolutions of thought' (Sandler and Rao 2012, p. 552). How we all think, feel, relate and act towards each other in terms of gender and equality needs thorough interrogation in order to advance the rights of women and girls.

Declarations

Consent to Participate This research does not include human or animal participants, and therefore no informed consent was required.

Conflict of Interest The authors declare no competing interests.

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