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Parity, paradigms, and possibilities: a constructive approach to advancing women's equality

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Abstract

Prompted by the midpoint assessments of achievement of the United Nations Sustainable Development Goal 5 (SDG5), this article considers the pattern of progress toward women's equality and how theory and practice can be harnessed to accelerate necessary further advance. It applies Kuhn's analysis of scientific paradigm shift as an explanatory framework and draws on a cross-section of the literature on women's equality to illustrate signs of shift in the current paradigm, notably the movement away from numerical parity conceptualization and measurement to the evolution and interrogation of more nuanced notions of equality and its operationalization in various social spheres. It is proposed that this movement is propelled primarily by a method involving four inter-related elements—awareness, belief, communication, and design (a–b–c–d)—each of which is described and illustrated by examples from social science research, development organization data, and the media. Limitations and implications for future research and applied activity are discussed and the constructive orientation to the contribution of diverse responses to an increasingly complex understanding of equality identified as an important takeaway from this analysis. The approach is offered as an accessible interpretive and practical framework for more consciously advancing a paradigm shift in women's equality coherent with the SDGs.

Introduction

In August 2022, the midpoint assessment of the Sustainable Development Goals (SDGs), UN Women bluntly summed up progress toward Sustainable Development Goal 5 (SDG5; achieving gender equality and empowering all women and girls):

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"The Sustainable Development Agenda, adopted by UN Member States in 2015, set a 2030 deadline for the achievement of gender equality and the empowerment of all women and girls. Now, with under 10 years left to meet it, the world is not on track. Amid the intersecting crises of COVID-19, the climate emergency, and rising economic and political insecurity, progress on gender equality has not only failed to move forward but has begun to reverse." (UN Women 2022a: paragraph 1)

For a century or more advance toward women's social, economic, political, and legal equality has been slow (see for example Valian 1999) but quantitative data indicated progress at least in terms of numerical parity—the number of girls forced into early marriage was declining, an increasing number of girls were going to school, more women were taking up parliamentary and other leadership positions, and more laws were being reformed to advance gender equality (United Nations 2021). For example, in its analysis of eight indicators (mobility, workplace, pay, marriage, parenthood, entrepreneurship, assets, and pension) the World Bank reported gradual global progress: in 2018, women and men had equal legal rights in six countries (World Bank 2018), by 2021 the figure had risen to ten (World Bank 2021). In 2018, the Global Gender Gap report, which has been tracking gender-based disparities since 2006 and benchmarks countries across dimensions of education, health, economic, and political systems, projected that the overall global gender gap would close in 108 years (World Economic Forum 2018). In 2019, measurement of the same indicators reduced that prediction to 99.5 years (World Economic Forum 2019).

By 2021, however, the trend had reversed. The revised estimate for closure of the global gender gap was 135.6 years. Even along dimensions where achieving parity is closest (education and health), the report notes that the rate of progress has declined, so although equality appears to be within reach it may yet take considerable time (World Economic Forum 2021). Work-related variables were especially impacted by COVID-19, causing some to refer to the economic crisis associated with the pandemic as a "she-cession" (Butter 2021). In the United States, for example, in September 2020, a month when 661,000 jobs were lost, 865,000 women left the workforce, compared to 216,000 men (Carrazana 2020). According to a global estimate, women's job loss was 1.8 times higher than men's during the pandemic (Madgavkar et al. 2020). Migrant women in domestic work, numbering some 85 million worldwide, were particularly adversely affected (UN Women 2020a). Most concerningly, the pandemic exacerbated men's violence against women. The pre-COVID-19 figure of 243 million women reporting intimate partner violence was estimated to have intensified due to social and economic stress and restricted movement during lockdowns (Evans et al. 2020; Lausi et al. 2021). In addition, the pandemic increased the likelihood of sexual exploitation and child marriage among women in depressed economies and under refugee conditions (UN Women 2020a). Based on the current rate of progress, at the midpoint assessment the UN's published estimate of years to reach equality is 286 years (UN Women 2022a).

Background and methodology

This backslide in the metrics exposes the superficiality of longstanding quantitative measures and the persistence of systemic inequalities. Although more women in the world experience improved conditions, nevertheless societies and economies, communities and workplaces continue to be based on gendered roles and implicit hierarchies, value to the common good and social prestige are disaggregated (Sandel 2020) and human dignity and equality are routinely compromised (Poo and Conrad 2015). This is not an unprecedented insight, rather a compelling reckoning with already observed slow or stalled progress (e.g., Shu and Meagher 2017; MacLeavy and Manley 2018) toward fundamental change in values or worldview, the absence of a paradigm shift. Indeed, when calls for a "new feminism" were raised in response to the disproportionate effects of crises on women, veteran feminists responded with reminders that what this generation of women sees as "new", older women have been laboring at for years (Brooks 2020; Ackelsberg 2021).

From a social science perspective, what can be offered in response to this pattern of observations about progress toward equality? With the goal of contributing to positive change, what constructive possibilities can be identified? What are the fruits of past efforts to advance women's equality and how do we keep moving toward paradigm shift in the face of setbacks? As demonstrated historically by civil and human rights movements, advancement toward a goal can be enhanced by active and explicit consideration of the nature of the change process and application to current individual and collective practice (Ruddick 1989). This article therefore explores this central question: How does theory about paradigm shift help us understand the case of women's equality and what elements of a method can be extracted from this application to accelerate the advance toward the goal of equality?

To address this question, I turn to Kuhn's (1970) analysis of scientific revolution as a guide to the change process and apply it to the case of women's equality. Based on this application, I consider some of the literature on women's equality to demonstrate that beside the parity metrics, slow progress, backsliding and backlash, there are signs that a paradigm shift is underway. I then identify and discuss four key elements—awareness, belief, communication, and design (a–b–c–d)—emerging from this analysis which combine to effect individual and social worldview change. The approach adopted in this article is deliberately interdisciplinary; it is essentially qualitative, involving interpretative analysis of a cross-section of secondary sources that include observation and anecdote, as well as quantitative social science research and organizational data to provide a broad sense of the way questions of equality are perceived, framed, and connected to an active process of paradigm shift. In the application of paradigm theory to the domain of women's equality, my intention is to acknowledge what is being experienced and observed by women, measured by organizations, and described by researchers, and to illustrate how a method, enacted by multiple and diverse protagonists, can give meaning and form to the conversion to a new paradigm in

service to the grand challenge posed by the SDGs. The focus on women in a unitary sense is not to imply uniformity of experience or condition, nor is it a comment on non-binary gender or sexuality, rather it is a construct aligned with the UN Sustainable Development Agenda that carries a research history and a future of possibilities of "particular things that happen" to a great many people in the world because they are women (Adichie 2015).

The cycle of paradigm shift and the case of women's equality

In retrospect, paradigm shifts may appear as stark rejection of outmoded forms; in reality, however, the process by which "new ways of perceiving the world come to be accepted" (Nielsen 2019, p. 12) is gradual, perhaps more accurately seen as movement along a continuum, as conceptions and approaches are examined, challenged, adjusted, and abandoned. Kuhn (1970) describes a cycle that starts with a "normal" state in which questions are raised and addressed through the lens of an accepted worldview, in a problem or puzzle-solving mode that does not seek to innovate but simply to explain. To take a well-known example from the women's equality paradigm, at the end of the nineteenth century the accepted explanation for the observation of sex differences in brain size and weight was that women were of lesser ability, function, and status than men (see Sowerwine 2003 for an overview of this paradigm under the influence of Paul Broca). However, within the normal state, it is also the case that some observations are not readily explained by the prevalent paradigm. For example, in the brain size-intelligence case, observations of the achievements of women in leadership positions throughout history (e.g., 'Abdu'l-Bahá 1912), the consistently greater intellectual capacity of women in certain contexts (e.g., Fuller 1845/1971) and the increased involvement of women in science (e.g., Somerville 1831) challenged the lesser ability assumption.

Initially, such anomalies are accommodated with adjustments of the old worldview. As anomalies accumulate, however, the model reaches a state of crisis, a period of pronounced insecurity "generated by the persistent failure of the puzzles [of normal science] to come out as they should" (Kuhn 1970, p. 68). The brain sex difference example again serves to illustrate this trend. Over time, the assumption that biological sex is directly correlated with emotional, cognitive, and behavioral characteristics and that "nature" and "nurture" are dichotomous has taken various forms and shaped arguments both to limit and to justify patterns of social, economic, and political participation and organization. Being conditioned to look for only two categories and only two preset states—difference or sameness—has a deep impact on conceptions of equality and social structures and persists in popular consciousness. As recently as 2017, it was still a problem: "Due to a deeply ingrained, implicit (but false) assumption that "equal" means "the same," most neuroscientists *knew*, and even feared that establishing that males and females are not the same in some aspect of brain function meant establishing that they were not equal" (Cahill 2016, p. 12). At around the same time, another neuroscientist reports encouragement for seeking evidence for stereotypical female/male characteristics: "If a difference was found, it was much more likely to be published than a finding of no difference, and it

would also breathlessly be hailed as an "at last the truth" moment by an enthusiastic media" (Rippon 2020, p. xiii). However, independent dualities are not supported by the evidence; the interaction between genes and the environment is well-established (e.g., Eliot 2012; Rippon 2020), and neuroscience reveals mosaics, not binary gendered brains (e.g., Joel and Vikhanski 2019). Further anomalies have arisen from other core assumptions about identity (e.g., Rivers 2018), human nature embracing a spiritual dimension (e.g., Johnson 2003) and increasing the participation of women in existing systems (for a full discussion of assumptions, see Razavi, forthcoming).

There is ample evidence that a shared worldview of equality has for some time been insecure. Gaps, inequities, and geographical unevenness notwithstanding, through the increased involvement of women in existing (androcentric) systems, it has become evident that numerical parity alone does not correspond to equality and is inadequate to meet the needs of societies defined in equal measure male and female. The proliferation of versions of theory and competing schools of thought guiding research is another sign of crisis according to Kuhn and is also evident in women's studies and feminist theory (e.g., Donovan 2013). Further, the problems that fuel the crisis are not new, a condition which again maps directly on to Kuhn's description of this stage of the change cycle: "the solution to each of them had been at least partially anticipated during a period when there was no crisis [in the corresponding science]; and in the absence of crisis those anticipations had been ignored" (Kuhn 1970, p. 75). Kuhn argues that in response to crisis, though people "may begin to lose faith and then to consider alternatives, they do not renounce the paradigm that has led them into crisis. They do not, that is, treat anomalies as counter-instances," rather "the decision to reject one paradigm is always simultaneously the decision to accept another, and the judgment leading to that decision involves the comparison of both paradigms with nature *and* with each other" (Kuhn 1970, p. 77). The confluence of multiple issues including the pandemic, climate change and political conflict (UN Women 2022a; see introduction) has pushed the equality paradigm closer to revolution in Kuhnian terms, in part because these conditions produced anomalies with unprecedented and widespread practical implications. This state gave impetus to the need for an alternative and to "a special sort of change involving a certain sort of reconstruction of group commitments" (Kuhn 1970, p. 180) to correct the exposed imbalance of the social and economic equation.

Kuhn's analysis of paradigm shift revolves around human thought, reaction and agency in the context of ever-widening circles of what might be termed community, and ultimately society. At every stage, the expansion connotes consensus, based not only on empirical data but also—and perhaps more significantly in the context of social change—"on shared values, reasoned judgment, and the convincingness of an argument" (Nielsen 2019, p. 13). Fundamentally, a paradigm shift involves choice—to look beyond existing ideas, to seek different solutions, and to try new ways—on the part of individuals who have been shaped by and even gained mastery in the old paradigm. While human beings are "profoundly influenced psychologically and socially" by structures and conventions, it is also human beings who create and can change them (Reardon 1985, p. 5). The first step or "central transformational task" (Reardon 1985, p. 5) in paradigm shift is to choose it: to make a conscious decision to reconceptualize equality and to change learned attitudes and behaviors

and replace them with different ones. At the same time, as Kuhn notes, the process of paradigm shift does not imply a finite goal or a precise vision of a future state; rather, the decision to seek an alternative to existing ways of thinking sets in motion processes that have the potential to result in widespread transformation of world-views and the development of such a vision. Feminist scholarship, for example, generates critical dialogue that becomes a source of knowledge in itself and undercuts some of the deepest epistemological assumptions of social science, including the very purpose of social knowledge (Westkott 1979). As such processes advance, they begin to provide a more compelling model for understanding phenomena and eventually displace previous conceptual frameworks.

Signs of shift in the women's equality paradigm

The reconstructive processes that lead to the emergence of commitment to a new vision have been at work for a long period in the case of women's equality. Particularly in the last two decades, debates and discussions in the media and the academy, in development and policymaking, in feminism and activism have evolved in terms of approaches and the issues being addressed. The UN's change of emphasis from the Millennium Development Goals to the Sustainable Development Goals in 2015, is a case in point. The SDGs set "ambitious and comprehensive targets missed in the Millennium Development Goals" and "boast unprecedented potential for dramatically challenging and changing the status quo of gender equality" (Nowacka 2015, paragraph 1); in addition to the targets set by SDG5, the embedding of gender equality in a number of other SDGs signals a shift in orientation to the nature of equality and its relationship to global development, especially with respect to alignment with a human rights approach (Fredman et al. 2016). However, at the same time, the UN SDGs are not universally accepted, in principle or in practice, as comprehensively capturing the meaning of women's equality. According to UN Women's own statement, "around the world, a growing backlash against women's rights is threatening even well-established freedoms and protections" (UN Women 2022a, paragraph 1).

As expected of a paradigm undergoing shift, equality remains an elusive and contested concept (Gosepath 2021; Bachiochi 2021), variously defined, operationalized, and disputed. Though the essential humanity of women and their basic human rights in terms of equal respect, worth, and dignity are enshrined in the Sustainable Development Agenda (United Nations 2015) and often assumed to be generally accepted (Gosepath 2021), exactly what those rights are, and how they are reflected and protected in society are issues that remain unresolved: "Equality is valued nearly everywhere but practiced almost nowhere" (MacKinnon 2007, p. 44). In particular, as societies have increased in complexity, the application of a theoretical concept of moral equality and its implication for the treatment of women has run into the persistent challenge of dealing with the "difference between treating people equally, with respect to one or another commodity or opportunity, and treating them as equals" (Dworkin 2002, p. 11). On the basis of human sameness and entitlement to equal treatment, women's equality has been tackled across multiple fronts, including

education, suffrage, employment, marriage, and reproductive laws, resulting in expanded rights and opportunities for women.

At the same time, these very gains have served to illustrate their own limitations relative to the aspiration of social equality and generated more nuanced questions about what equality means in a moral, socio-economic, and political sense. In fact, a striking feature of the literature and an indication of movement toward a new paradigm is the abundance of questions, interrogating notions of difference and sameness, women's identity and role in society: How are women the same? How are women different? Why? Is it important? How is diversity valued and counted? What is fair in the distribution of resources? "First we must ask," writes de Beauvoir (1956, p. 13), "What is a woman?" Nussbaum (2001, p. 46) ponders, "All over the world, women are resisting inequality and claiming the right to be treated with respect. But how should we speak about this struggle? What account shall we use of the goals to be sought and the evils to be avoided?" MacKinnon (2007, p. 48) further probes the adequacy of the paradigm: "How can a subordinate group be seen as, or be, 'like' dominant groups if society has organized inequalities along the lines of the group's socially perceived "unalikeness"?" Manlosa and Matias (2018) query the gender parity mindset that underlies so-called equality statistics: "But what is gender parity? What role does it play in promoting gender equality?" Garcia (2021, p. 4) asks pointedly, "Do women somewhat participate in patriarchy? If so, can this participation be considered voluntary or is it merely the result of the omnipotence of patriarchy?".

Such academic questions have emerged in parallel with the changing emphasis in development work noted earlier and flag a shift in thinking past a numerical parity paradigm to a deeper exploration of the meaning of equality and its measurement. A focus on the role of norms, socialization and the persistence of androcentric structures and systems is a central theme of the shift. Fredman (2016), for example, argues that substantive equality goes "beyond the right to equal treatment, equal opportunities or equal results, or a simplified egalitarianism or right to dignity" (p.738) and should be approached multi-dimensionally "to redress disadvantage; address stigma, stereotyping, prejudice, and violence; enhance voice and participation; and accommodate difference and achieve structural change" (p. 712). Indeed, research shows that despite efforts to even out the numbers of women and men in social spaces and roles, stereotyped perceptions of the sexes have not (yet) disappeared in younger generations; although women are now viewed as more competent (e.g., intelligent, creative) than in the past, this development does not correspond to perceived equal status and there remains a strongly stereotypical view of women as more communal (e.g., affectionate, emotional), and men having greater agency (e.g., ambitious, courageous; Eagly et al. 2019). That said, focus on the norms of androcentrism has led to the re-examination of practices once considered gender neutral, to highlight the "default male" (Criado Perez 2019) that quietly pervades human social infrastructure. For example, in the workplace, policies intended to be gender-equal or even to promote the advancement of women have been found to undermine women's equality due to a masculine culture of contest in which "real men" are the ones most likely to thrive (Berdahl et al. 2018). Androcentric norms are also being challenged at the level of research practices; for example, the European Commission

stipulates that grant recipients must incorporate sex and gender analyses (European Commission 2020) and *Nature* journals similarly require authors to explain how sex and gender are considered in research being submitted for publication (Nature Editors 2022).

The discourse about women's equality has also shifted in relation to cultural consciousness; cross-cultural norms have been identified and examined, and the underlying predominantly European and North American ideologies, epistemologies, and economic models that shaped early feminism have been challenged. Nussbaum (2001), for example, moves from the language of human rights to broaden the conceptual base of equality and development by elaborating a cross-cultural capabilities approach "as a humanly rich alternative" to the "inadequate theories of human development" (p.62) that analyze wellbeing in terms of preference satisfaction or economic growth. Mohanty (2003) draws attention to understanding women's equality with a consciousness of "the lines between and through nations, races, classes, sexualities, religions, and disabilities" and "the tension between the simultaneous plurality and narrowness of borders and the emancipatory potential of crossing through, with, and over these borders in our everyday lives" (p.2). She foregrounds the systemic role of coloniality and capitalism and advances a vision of equality in which "everyday feminist, antiracist, anticapitalist practices are as important as larger, organized political movements" (p. 4). Cultural sensitivity is further encouraged by standpoint theory which posits that knowledge stems from social position—less powerful members of society are able to offer a more complete view of social reality as they are attentive to both their own minority experience as well as the majority perspective (Nielsen 2019). Valuing the perspective of non-dominant groups and increased emphasis on intersectionality in contemporary feminist writing have encouraged greater inclusivity in the generation of knowledge, insight, and practice with respect to women's equality (see for example Munro 2013; Harding 1991). Smith's (2010), institutional ethnography, for example, focuses on everyday lives and experiences from the inside to generate understanding about social relations and their expression in institutional forms, while Harding (1991) highlights the importance of women's experience in exposing male bias to advance scientific knowledge.

Another sign of shift is found in the way evolving conceptions of equality play out in practice in various spheres, such as the economy, the law, and governance, as demonstrated by a few brief examples. In economics, changes in the labor force and the rise of overwork (working too hard, too much or too long) have been identified as significant structural factors correlated with gender attitudes (Shu and Meagher 2017). Significantly, the status of women is now established as one of the indicators of overall equality, health, and happiness, and the empowerment of women as a key component of the redistribution of wealth required for increasing overall prosperity (Raworth 2018). In law, MacKinnon (2007) describes the emergence of a "new equality jurisprudence" to "institutionalize social equality, rather than inequality, through legal equality initiatives" (p.57). She illustrates the broader implications of such initiatives with cases from the Supreme Court in Canada that recognized women as a historically disadvantaged group and concluded that "pornography, in its making and through its use, contributes to violation of and discrimination against

women individually and as a group, harming the community's interest in equality" (p.57). Similarly, the proposal of the Misogyny and Criminal Justice (Scotland) Act openly addresses the interpretation of women's equality, departing "from the established practice of having law that is neutral with regard to gender" because "to eradicate misogynistic crimes these laws have to be targeted at protecting women" (Kennedy 2022, p. 7). Governance structures, too, seek to adapt to remain fit for purpose to advance gender equality, and women's rights advocates press to "create space for feminist civil society voices, meaningful deliberation, and state-civil society alliance-building" (Sandler and Goetz 2020, p. 258) in the multilateral system of the UN.

These conditions of change in intellectual and applied approaches to women's equality have spawned some shift in the measurement of equality to reflect increasingly nuanced notions. As noted above, beyond parity statistics, greater attention is being given to the qualitative content of laws, policies and practices, and the assessment of their impact on women under diverse conditions. Confronting androcentric defaults through gender-disaggregated data gathering and reporting requirements further transforms equality measurement. Feminist methodologies provide a framework for asking different questions, stepping outside approaches shaped by patriarchal assumptions, challenging positivist "objectivity" and "measuring" equality to represent subjective, reflexive, and relational realities.

The work of academics and practitioners seeking different definitions, explanations, and models are indications that the women's equality worldview is being redefined toward greater complexity based on higher-level organizing principles in relation to human nature, identity, and experience. These principles move beyond the strictly material to include dignity, capability development, justice, and happiness. More attention is being afforded to diversity on one hand and to collective responsibility and the benefits to the common good of systemic change on the other. Collective consciousness is moving toward a conception of equality being shaped by efforts to improve the lives of women in the world, to reform the norms that govern expectations about women, to communicate the nature of women's experiences, to increase the involvement of women in all aspects of social, economic, and political activity, and to reform systems and improve the quality of life for society in general. Seen as signs of shift in the context of the paradigm cycle, these developments constitute a promising basis for further significant change.

Elements of a method

I now turn to the second part of the research question concerning the implications of this paradigm cycle analysis for future efforts to achieving women's equality. Ruddick (1989)notes that a long-range goal can be too general to dictate strategy, and that over time a method may serve to give meaning to such a goal. As a goal, the broad notion of equality for women certainly falls into this category, evolving as it does with the passage of time and the accumulation of insight, theory, and practice, as reviewed in the previous section. At the same time, it is clear that lived experience falls short of the long-range goal. This discrepancy, like the anomalies observed in a

paradigm crisis, sparks responses which can be seen to constitute a method for moving forward. Some of these efforts have obvious immediate effects, and some set in motion or reinforce processes that ensure continued engagement with the long-term goal. Although there are conceivably infinite particular forms that such actions can take, they are all coherent with the construction of a new worldview.

The signs of shift reviewed in the previous section suggest four inter-related elements of a method by which the movement toward an alternative paradigm of women's equality is advancing and by conscious application could be further accelerated: (a) awareness; (b) belief; (c) communication; and (d) design. These elements are evident in social science and development, social media and culture. They operate at individual, institutional, organizational, and community levels and contribute to the transformation of attitudes and norms. The a-b-c-d approach to equality paradigm shift outlined here focuses on process. It is a dynamic model, in which all elements work together interactively to advance the paradigm shift, allowing for various combinations, specialization, innovation, and synergies.

(a) Awareness

Awareness of anomaly or incongruity is a prerequisite, or at least a precursor, of worldview change. Increasing consciousness of existing conditions for women in the world, both at the macro and the micro level is therefore a fundamental component of the equality paradigm shift. It involves the expansion of information about women, is usually descriptive, includes quantitative and qualitative observations, and fills a data gap created by a long history during which questions about female experience were seldom asked.

At the macro level, the awareness strand is manifest in more rigorous data collection and statistical reporting. NGOs (e.g., UN Women, the World Bank, the World Economic Forum) are often at the forefront of these efforts, supported by academic researchers, activists, and journalists documenting gender data gaps and related systemic bias ingrained in society, and embedded, for example, in technology, urban planning, medical care, organizational design, academia, and private homes (Criado Perez 2019; Marcal 2021). Exposure of data gaps and the implications for women's lives feeds directly into refining the conception of equality. With heightened awareness of missing information, sex disaggregation is increasingly becoming a research requirement (as in the case of the European Commission and *Nature* journals cited earlier) and a key feature of a new paradigm. Similarly, expansion of intersectional data across multiple domains, such as health (e.g., Figueroa et al. 2021), the law (e.g., Atrey 2019), and workplace practice (e.g., Rosette et al. 2018) generates increased awareness and leads to deeper understanding of what is required of a paradigm shift, to take "on board the experiences and challenges faced by different groups" to be "better able to understand the issues at hand and, therefore, find solutions that work for all" (UN Women 2020b).

The importance of awareness at the micro level is reflected in feminist epistemologies and methodologies that value qualitative narrative and analysis, often captured in first person accounts through interviews. At this level, then, are women's

"stories", a form of data sharing without which the inequality of the lived experiences of women remains unknown, and assumptions about equality are left unchallenged:

> "Everyone was sitting around…when one woman happened to mention a creepy encounter she'd had with a guy on the tube [London Underground] on her way over. The men at the table were shocked. The women were shocked that the men were shocked. What world did they live in?" (Chocano 2020—interview with Emerald Fennell)

Micro level awareness is a necessary complement to the macro level, in part because studies indicate that macro level statistical data can misrepresent actual experiences and fail to acknowledge their implications. For example, research shows that women under-report violence and sexual assault (e.g., Wilson and Miller 2015) and also that the fear of crime is greater among women than men (e.g., Mellgren and Ivert 2018). That "ever-present fear we're practically taught, and later learn, to feel when we're alone in public" (Campoamor 2015) is part of a range of socialized responses to everyday situations not reflected in the violence statistics. In fact, the violence statistics may well exacerbate that fear. As information emerges from accounts of personal experience, a different kind of awareness grows, and standards of acceptability shift. In addition to the problem of violence, personal stories of access to education in certain parts of the world (Yousafzai and Lamb 2013), exposition of the impact of advertising on body image and mental health issues (Kilbourne 2014), and the generational pressure of simultaneous childcare and eldercare (Calhoun 2021) are some of the areas in which growing awareness is influencing expectation and practice.

The awareness strand of the process of change therefore consists of the active augmentation of quantitative and qualitative data about women, about the world and the way it is built through a gendered and intersectional lens; it includes the systematic collection of data and exposing the impact of social norms on obtaining accurate quantitative and qualitative information.

(b) Belief

To contribute to paradigm shift, awareness must be accompanied by the belief that observed data constitute inequality and are unacceptable according to a desired goal, a conviction to explicitly reject existing standards, norms, and expectations. Belief in equality is not a given, nor it is evenly distributed. Recent research shows that 42% of a global sample believe that efforts to achieve women's equality have gone far enough, with more men (46%) than women (37%) expressing this view (Ipsos and Global Institute for Women's Leadership 2022). Polarized reactions to the U.S. Supreme Court's overturning of Roe v. Wade (e.g., De Pinto et al. 2022 report 59% disapproval vs. 41% approval of the decision in a YouGov poll) illustrate even more powerfully the range and strength of beliefs about women's equality.

In contrast, without strong belief in the value of an expanded notion of equality, the social cost of pointing out what is seen or experienced is often judged too high, and even when inequality is obvious, it is not mentioned. Even when

trends are present in the data, a culture in which equality is uncomfortable pushes back against transparency. For example, a 2018 working paper of the Social, Economic, and Housing Statistics Division of the US Census Bureau found in households where wives earn more than husbands, both men and women adjust their reporting to align with social norms: men's incomes are inflated by 2.9 percent and women's deflated by 1.5 percent (Murray-Close and Heggeness 2018).

Adichie (2015) argues that in a world that has socialized women to protect the fragile egos of men raised to be "hard", it is in some senses easier to accept invisibility as the lesser of evils. She presents a number of examples of women and men who see inequality and even reject it conceptually but accommodate existing sexist norms to be able to pursue their personal goals—an unmarried woman who wears a wedding ring at work conferences to be taken more seriously, another who sells her house so as not to intimidate potential husbands, a female executive who withholds opinions to be more likeable in the eyes of co-workers.

Manne (2018) conceives of such behaviors as expressions of misogyny, which she describes from a woman's perspective as.

> "a name for whatever hostile force field forms part of the backdrop to her actions, in ways that differentiate her from a male counterpart (with all else being held equal). She may or may not actually *face* these hostile potential consequences, depending on how she acts…She can escape aversive consequences by being "good" by the relevant ideals or standards…" (p.19)

Similarly, Gilligan and Snider's (2018) evaluation of the persistence of patriarchy suggests that despite awareness of inequality, conviction is weakened by the psychological threat of the potential loss of significant relationships. Gilligan explains:

> "…as they reached adolescence, I saw girls resisting something that was in a sense forcing them to make a choice, which the more articulate or the shrewder girls among them saw was a very problematic choice, which was do you want to have a voice? Meaning do you want to keep on being able to say what you feel and think and know or do you want to have relationships, in which case, you have to basically learn what other people want you to say rather than saying what you feel and think." (Lumanlan 2020—interview with Carol Gilligan)

Precisely because of the powerful influence of social and cultural beliefs on behavior, the equality paradigm shift involves emphasis on universal values and moral imperatives and principles, rather than the pragmatics of change. In that sense, waves of feminism can be seen as surges in such conviction expressed in reaction to particular inequalities, alternative belief sets to counter certain political, economic, social, and cultural elements and arrive at new norms. Debates about feminism, post-feminism, the death of post-feminism and fourth wave feminism (Rivers 2018) and attempts to reclaim lost vision (Bachiochi 2021) are thus belief-based aspects of paradigm crisis and the search for a worldview strong enough to provide a way forward.

While the awareness strand requires more detailed information and intersectionality, the belief element of shifting the equality paradigm demands attention

to universal human values, including orientation toward principles of justice, human rights, and dignity (e.g., Fredman 2016), reciprocity, and responsibility for the common good, encompassing women and other marginalized groups (e.g., Confortini 2010) and the protection of the environment (e.g., the ecofeminist "Declaration of Interdependence" cited in Donovan 2013, p. 209). In Gilligan's framing, the core human value is the right to have a voice that is listened to with respect; she argues that a less than principled approach allows patriarchy to undermine democracy (see Lumanlan 2020). Equality beliefs encompass the secular, broadly spiritual and the religious. Though religion commonly presents as a conservative force, progressive motivation can also derive from religion, and the development of religious feminist thought (e.g., Groenhout and Bower 2003; Badran 2009) is a feature of the shifting paradigm. Efforts to address tensions between religious and secular ethical bases invites further fusion of spiritual and religious beliefs into theory and practice as contributions from faith-based perspectives are increasingly valued in the shaping of the discourse about equality (UN Women 2017) and development (Marshall 2022).

Development of thought at the level of belief is critical to determining expectations for what is acceptable and therefore contributes directly to paradigm shift and the emergence of a new worldview.

(c) Communication

Awareness of lived experiences and beliefs about equality depend on communication to realize social and cultural potency—to shape norms, expectations, and behavior. Conscious efforts to shift the equality paradigm are made through communication, both in terms of the content (reflecting awareness and belief) and the approach (multi-pronged and pervasive), and the paradigm crisis plays out most publicly in the media:

> "The story of when women make headlines is, like most stories about people, full of contradictions. It is violent, sensational, biased, hopeful and empowering although not all of them in equal measure." (Nicoletti and Sarva 2022)

While sexist content remains in news and social media, advertising and other communication channels, there is also significant pushback against such content. Marketing and advertising are under scrutiny for sexist content (Cunningham and Roberts 2021); deeper questions are being asked about what constitutes sexism (Tesseras 2021) and the way the media messaging disempowers women (Hammett 2020). For example, increased research, commercial and media attention to the issue of body image (e.g., the academic journal *Body Image*; the #SeeHer movement) and pressure on the fashion and advertising industries to implement standards for the weight and age of models have resulted in legislative action in several countries, and ad banning in other cases. More generally, though female stereotypes persist in media headlines, there is gradual decline in the use of gendered language and increasing use of empowering words relating to women (Nicoletti and Sarva 2022) and increased commitment to tackle online abuse and improve women's safety on

some of the most widely used platforms (Facebook, Google, TikTok, and Twitter; see Web Foundation 2021).

Mirroring the intersectional emphasis in increasing awareness, a range of standpoints and modes are increasingly adopted, lending impetus to paradigm shift. "It is common sense epistemologically," writes Ruddick (1989), "that alternative perspectives offer distinctive critical advantages" (p.27). UN Women's editorial series, for example, is explicitly framed under the headings "From where I stand", "A day in the life of…", and "In the words of…". Replacing a single dominant narrative with the complexity of multiple simultaneous intersectional narratives is necessary for social change, as the lived experiences of the many constitute "society" more authentically than those of a narrow subset of humanity. Multiple modes of communication and types of content also offer advantages in increasing consciousness, influencing attitudes, and shifting norms.

Personal stories play a critical role in capturing attention. Blankenship (2019) argues that the use of the personal facilitates communication, "helps bridge gaps in understanding across marked social differences" and fosters "rhetorical empathy" using "language, still and moving images, and sound" in "a conscious, deliberate attempt to understand an Other *and* the emotions that can result from such attempts—often subconscious, though culturally influenced" (p.7). The personal is the core of the conversational mode, which serves as the basic unit of communication for sharing, clarifying and challenging perspectives, articulating, questioning and refining values and visions, forming and changing attitudes, and strengthening capacities, confidence, and conviction. For example, research on deep canvassing indicates that even short personal conversations intended to help people reflect honestly on their own experiences and connect with others at a common human level significantly influence attitudes to marginalized groups and reduce prejudice (Broockman and Kalla 2016). Conversation, and consultation more broadly in public spaces, are key tools at the level of practice, both for raising awareness of equality issues and for women's perspectives to be included in the consideration of community issues (e.g., Leder et al. 2020; Udaykumar et al. 2016).

The expansion of communication of personal content through digital and social media has provided the means for more extensive messaging about women's experiences. For example, Blankenship (2019) highlights the case of "Eu, Empregada Doméstica" (I, Housemaid), the social media presence created in 2016 by Brazilian activist Joyce Fernandes which attracted thousands of personal stories and drew attention to the exploitation of female domestic workers in Brazil. Better known examples of how digital communication has allowed initiatives to spread globally are the Everyday Sexism Project and #MeToo. Communication-based movements such as these reinforce a sense of solidarity and common purpose (Pullen and Vachhani 2019) and provide critical platforms for individuals and organizations (e.g., UN Women; the World Economic Forum) to advance gender equality agendas.

(d) Design

The design of new structures and systems is both part of the process of paradigm shift and a necessary product of it. Design is creative and constructive—it goes

beyond identifying problems and exposing weaknesses to finding ways to re-structure so that the beliefs and values of gender equality are "nurtured or nudged, rather than ignored and eroded" (Raworth 2018, p. 123). Through the design element, longstanding organizing principles (such as default male data, hierarchy, physical presence, and relevant experience) are challenged to re-frame the nature, purpose, and value of human activity in individual and societal terms (Razavi 2021). Gardner and Begault (2019) note:

> "As designers, it's important for us to think about who we represent and how, and rely more on representation and engagement to ensure good intentions don't lead to further stereotyping or tokenizing, undermining the success of interventions meant to make vulnerable groups visible…But our approach must also include humility and a recognition of the limits of design. Though design is powerful, space is ultimately created and transformed by social action." (Gardner and Begault 2019)

As an element of a method, design manifests in new structures and systems as well as the transformation of existing entities and organizations, red flagging and filling in data gaps, modifying regulations, laws, and policies, and rewriting algorithms to generate alternatives to prevailing systems crafted in the old paradigm, based on the equality-conscious generation of knowledge. Design responses to paradigm crisis are found at the community level in homes, schools and workplaces, as well as at the level of social and political institutions, social networks, religious and community groups, companies and businesses, educational and research programs, and non-governmental organizations. Recognizing issues as they affect all members of a system, rather than a sub-group, is a key feature; such approaches encourage shared ownership, leadership, and movement toward greater equality. Some attract widespread attention, but many are local, organizational, or issue specific.

In medicine, for example, one of the world's leading medical journals, *The Lancet*, publicly committed to gender equity and feminist reform in research and practice (The Lancet 2019). In international peacekeeping, a UN partnership has created a mechanism to remove structural barriers to the participation of women in international peacekeeping operations through the addition of accommodation and other buildings, such as an ablution unit in Lebanon, to serve women's welfare (UN Women 2022b). In the last decade, an increasing number of countries have adopted feminist foreign policies (CFFP 2019) and intersectional, gendered perspectives are also explicit in climate change response policy development (e.g., WBG 2020). In urban planning, the city of Vienna has used gender mainstreaming for over 60 projects to transform public spaces, including diversifying space allocation in parks, widening pavements, adding street lighting and seating and introducing a gender analysis requirement for housing contract bids (Gardner and Begault 2019). In agriculture, Leder et al. (2020) describe a program in Nepal that openly addresses inequalities through gender-focused activities and discussions applied to small-scale agriculture, domestic labor, and resource management institutions, such as irrigation systems and collective farming, to generate more sustainable and collectively beneficial practices. At the level of workplace organization, Ely and Padavic's (2020) research at a global consulting firm similarly challenges principles from a gendered

perspective, pushing back against the "general problem of overwork that prevails in contemporary corporate culture" for which "women pay higher professional costs" (p.11).

Examples such as these highlight a key feature of the design element of advancing paradigm shift—building on the existing participation of women in all segments of society in order to reform at the structural level and to secure more inclusive future involvement—as well as the importance of expanding the range and scope of design.

Discussion and conclusion

In the face of the imperative to advance women's equality, constructive attitudes and approaches are urgently needed to translate theory into practice and stimulate further social change. Circling back to the SDG assessment, the message is clear:

> "Without heightened commitment from the global community, gender equality will remain nothing more than an unrealized goal. The time to act and invest in women and girls is now." (UN Women 2022a, paragraph 2)

The analysis presented in this article offers form to that heightened commitment. Applied as a model of social change, Kuhn's theory of paradigm shift in science provides a useful approach to understanding the pattern of progress toward equality for women in the world, positioning current experience as response to paradigm crisis and a search for an alternative worldview, and accounting for simultaneous narratives of advance, stagnation, and backsliding. Movement toward an equality paradigm revolution, despite observed stalls, continues, and the possibility of transformation of thought and action embedded in this model can be discerned in the body of both theoretical and practical responses contributing to an emerging new vision.

Of course, this analysis is subject to limitations. In terms of theory, this article is confined to the application Kuhn's paradigm cycle to patterns of social change in women's equality. However, such an exercise could usefully be carried out using other theories of the change process. Similarly, a comparative analysis from various social science and other conceptual perspectives would no doubt further enrich understanding of the pattern and pace of the movement toward women's equality. This article is also limited in the breadth of literature surveyed; the determination to be multidisciplinary involved consideration of several bodies of literature, often with very little overlap, and therefore deep immersion in any single discipline literature was precluded. Also beyond the scope of this article is a consideration of the framing of the SDG5 targets and indicators relative to the evolving worldview of women's equality and feminist critiques of mainstream social science methodologies (e.g., Harding 1991). In addition, discussion of the paradigm shift would benefit from an evaluation of the guiding principles and the integration of transformative approaches to implementation at the UN's midpoint assessment of achievement. A further avenue for future research lies in the study of the four elements of the a-b-c-d approach in an applied context, for example in an educational setting, and their impact on attitudes and local norms concerning women's equality.

Nonetheless, the a-b-c-d formulation of a method to advance a long-range goal provides a practical guide to future efforts to promote women's equality. Initiatives can be considered and evaluated in terms of these four elements to prompt and enhance more deliberate and urgent advance: What new awareness is generated? What beliefs and values are articulated or endorsed? With whom and how are we communicating? What new structure can be designed? In relation to progress toward specific SDG targets, which of these elements would best be adopted or intensified to effectively address particular circumstances?

The current paradigm shift involves accommodating greater diversity and complexity of thinking and action as well as commitment to the evolving process of understanding substantive equality. The method as goal approach allows for meaningful forward movement in both these respects. The approach is both integrative and fluid. It builds on strength and calls for a wide range of protagonists to draw on the resources and perspectives to which they have access to address a complex set of issues. Diversity of response and broad participation are critical, since the approach relies on the idea that characteristics of the goal must be reflected in the method—inherent in the way we choose to construct a new paradigm are the features of the world we want to see, generating microcosms of a future paradigm. At the same time, the absence of agreement about theory that characterizes paradigm crisis can be offset by sufficient consensus about the change process, providing a channel of "ongoing engagement and discussion, to create new consensuses" (Fredman 2016, p. 714). Collective consciousness therefore develops in a non-linear fashion alongside the capacity to draw on principles to generate more textured concepts and modes of functioning (Fredman et al. 2016; Razavi, forthcoming), and greater openness to new understanding and sources of knowledge and meaning. The constructive orientation combined with the notion of consensus-building are important conclusions from this analysis; the protest or negation of an old worldview or the practices derived from it is not enough to move to a new one, rather there is a need to put as much or more effort into building an alternative, despite slow or stalled progress or even backsliding.

The approach to paradigm shift outlined here therefore puts forward a coherent conceptual and practical framework for individual and collective action. It is offered with the aim of adding clarity to the interpretation and evaluation of current efforts and focus and momentum to future efforts by individuals, groups, institutions, organizations, and communities toward the long sought-after goal of women's equality.

Data availability Data sharing not applicable to this article as no datasets were generated or analyzed during the current study.

Declarations

Conflict of interest The author has no competing interests to declare that are relevant to the content of this article.

Ethical approval This article does not contain any studies with human participants performed by the author.

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