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Reproducing Binary Sex: The Post-pandemic Theories from a Gender and Normative Perspective

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Abstract: During the notorious collective experience of COVID-19 pandemic, the prospect of a better future was featured in public interventions in the light of the recent painful circumstance. The theories of the post-pandemic world were prominent in this debate. This article attempts to examine some of them in order to investigate how broader social theories integrate the gender perspective. From the approximately forty English-language monographs by important scholars and thinkers which have characterised the relevant body of work, only ten of them have been found to contain explicit gendered references. Those were the selected sample of an analysis which was conducted from a social constructionist point of view articulated with a (neuro) feminist perspective. Despite the epistemological and methodological advances in the study of gender relations, the long dominant approach of binary sex constituted the basic framework of the analyses in the examined post-pandemic theories. This is a choice that does not advance the public debate on gender relations, since it de facto ignores and silences the multiplicity of gender identities and intersectional premises.

Keywords: COVID-19 pandemic; post-pandemic; binary sex; gender duality normative perspective.

I. Introduction

The COVID-19 pandemic, an episode of collective stress, as it has been called (Capano et al. 2022, 5), is a global historical event which seems to have acted as a facilitator of structural adaptations and cultural changes, directly related to the dimensions of techno-information globalisation and the timing of late modernity, or, in other words, the shift in our sense of time towards a continuous present (Demertzis & Eyerman 2020, 445). As an accelerator of inequalities for the poorest segments of the population (Zissi & Chtouris 2020, 71), the notorious health crisis shaped not only a contentious field for the constitution of public policies, but also, and, above all, created an extremely burdensome social context, the enormous costs of which will only become known in retrospect (Kołodko 2020). In fact, it is rather premature to define precisely the consequences of the pandemic, for the same reason that the long-term effects of a war or an economic recession can last for generations and affect policies in what are, for the most part, unexpected ways

(Capano et al. 2022, 4).

Both during and in the wake of the recent health crisis, the prospect of a better future was strongly promoted in the public sphere, through statements, daily articles, and more structured texts and books. In this context, McAuley and Nesbitt-Larking (McAuley & Nesbitt-Larking 2022) categorised the findings from their analysis of several theories of the pandemic and post-pandemic impact into five inter-related social developments that the health crisis is thought to have fuelled; the renaissance of rationality and science, the return to social equity and justice, the re-foundation of the interventionist state, the re-orientation towards the local and the community, and the re-foundation of democracy. In a similar vein, this article attempts to examine some selected theories of the post-pandemic world, albeit from a gender perspective. Specifically, there were approximately forty English-language monographs by important scholars and thinkers which have characterised the relevant body of work (e.g., Rickards 2021; Schwab & Malleret 2020), but only ten of them have been found to contain explicit gendered references. In an attempt to investigate how discourses around gendered categorisations are embedded in the wider public discussion, these ten monographs constitute the selected sample of the analysis (Barnett 2022; Christakis 2020; Dodgen-Magee 2021; Echegaray et al. 2021; Galloway 2020; Gerbaudo 2021; Holden & Dixon 2021; Mohan 2022; Stoesz 2021; Ullah & Ferdous 2022); a choice that, surely, set the whole analysis in a context which inevitably relies on a north-western perspective.

II. Gendered Facets of the Health Crisis in Post-pandemic Theories

At the onset of the health crisis, the United Nations Secretary-General, António Guterres, called for an immediate global ceasefire because vulnerable populations in conflict zones, including women, were at even greater risk from the pandemic (Kahl & Wright 2021, 243). This was a vital and symbolic, in terms of the importance of this global organisation, intervention with a gendered character, which was in line with the legitimate concerns of many individuals and organisations that the pandemic was going to affect men and women disproportionately, in different fields, in different ways. The majority of the theories of the post-pandemic world which are examined in this article are aligned with this logic; that is, the recent health crisis had several gendered dimensions, which worked, to a large extent, negatively for almost all women globally (Mohan 2022, 59).

More specifically, the living conditions of women made them more vulnerable, both to the SARS-CoV-2 infection itself and to dealing with the pandemic in general, since the dominant field of gender and traditional gendered norms form a rather difficult micro- and macro-social context for them (Ullah & Ferdous 2022, 81). As Barnett (Barnett 2022, 120) notes, previous epidemics were characterised by a passive acceptance of victimisation, a dimension associated with the traditional family structure and the values of stoicism

and subordination that characterised it. In the recent health crisis, the general demand for access to treatment and vaccinations constituted a denial of the earlier renunciation of the claim to the basic right to life and health. This is a qualitative change related to all the transformations and tropisms of late modernity, but the English activist links it to feminism, as a vehicle of ideas and attitudes for the assertion of basic rights for all the members of the family, and the prospective removal of gender inequality in general.

The most significant example of gender asymmetry in the case of the pandemic was the rise in violence against women, which increased sharply as a result of lockdowns, hence, denying them the fundamental human right to live and work in a safe environment (Barnett 2022, 84). Undoubtedly, the recent health crisis not only increased the exposure of women to gender-based violence, but also their sensitivity, if not their alertness, to this issue, since, during the restrictive measures, quite literally, the perpetrators and the victims were confined to the same physical spaces, thus, increasing their overall instability, poverty, marginalisation and the disintegration of social cohesion (Barnett 2022, 25). This "ignored pandemic" is directly linked to the failure of states and governments to handle this situation, despite the observed escalation of violence against women during lockdowns (Harvey 2021, 5), a development that has been an activating factor for the feminist movement, both as a form of protest and as social action with a specific target (Kahl & Wright 2021, 281). In fact, according to Standish and Weil's (Standish & Weil 2021) study, both female suicides and femicides, two specific forms of violence with an evident gendered dimension, increased during the first phases of the pandemic, due to the horizontal public health measures taken at local and global levels.

As women are systematically and disproportionately affected during disasters and emergencies, it is crucial to recognise the gender specificity of pandemics in order to design policies at national, regional, and global levels; something that was not the case with the COVID-19 pandemic (Ullah & Ferdous 2022, 38). In most cases, pandemic management policies were horizontal and gender-neutral, i.e., without gender mainstreaming and meaningful stakeholder consultation; as a result, there was the emergence of a number of negative developments, such as increased violence against women and worsening gender inequality in the workplace, with young women, migrant women, and women in precarious employment becoming even more vulnerable and disadvantaged. Upon this basis, Echegaray and colleagues (Echegaray 2021, 3 and 19) argue that there is no reason to celebrate any potential positive benefits from the period of lockdowns, to the extent that gender inequality escalated across society globally. Their argument is mainly based upon Power's (Power 2020) study, according to which the pandemic exacerbated gender imbalance globally, at least in terms of forced leave and layoffs, but also in terms of the burden that women traditionally bear in household chores and family care. As Papagiannopoulou and Moshovakou (Papagiannopoulou & Moshovakou 2022, 96) point out, the pandemic brought into sharp focus the pre-existing, deep and interrelated gender inequalities, intertwined with intersecting systems of oppression and vulnerability, while,

for Kampouri (Kampouri 2022: 2), the pandemic emergency was used to legitimise the marginalisation of gender issues and to silence views that pointed out that women were at risk of being disproportionately affected.

In the same context, the closure of schools revealed a number of different effects in terms of the daily lives of men and women, and between rich and poor (Christakis 2020, 108), despite the fact that, during the closures, the proportion of male participation in childcare, household care, and domestic work in general increased (Christakis 2020, 210). In other words, the health crisis highlighted the long-standing inadequacies of the education system and childcare services, which disproportionately burden women (Gerbaudo 2021, 267), a situation that is directly linked to the highly problematical condition of the economic dependence of unemployed women on the men of the household in question and their status as secondary workers, since it is understood that, for various reasons, the informal sector of any economy employs millions of people, most of whom are women (Ullah & Ferdous 2022, 79–81). As Stoesz (Stoesz 2021, 16) adds, a social security system based upon the male breadwinner is profoundly inadequate for a post-industrial economy in which women form a large part of the workforce.

For Dodgen-Magee (Dodgen-Magee 2021, 184), a key issue is the awareness of the additional hardships and discrimination that a number of systemic assumptions, such as racism, classism, sexism, ageism, ableism, and the effects of colonialism cause in the everyday lives of women. In other words, the intersectional logic of discrimination against women should be taken for granted (Crenshaw 1991), with Ullah and Ferdous (Ullah & Ferdous 2022, 79) highlighting the interconnectedness of all five key areas of disadvantage, prejudice, and social pressures on women and individuals in general, namely, race/ethnicity, gender/sexuality, economic status, age, and health. Thus, the stigma of the pandemic often articulated with other forms of discrimination, such as a person's gender or sexual identity (Ullah & Ferdous 2022, 38).

Mohan (Mohan 2022, 7), at this point, recalls how, in the social sciences, gender, age and sexuality are a discourse not only of distorting preconceptions, but also of interpreting the sources and forms of discrimination, inequalities, and injustice. He states that, despite the fact that any progressive developments in the field of civil rights have been achieved through identity politics, there is now a "deviance with vengeance in the name of 'diversity'" (Mohan 2022, 36). This is because the respective interest groups and identity-politics movements distort, to a certain degree, the logic of political correctness, either by excluding other people from identity claims, or even by hating other identities, a rather myopic strategy that works in a profoundly non-dialectic manner. Especially in contexts in which accusations of sexism and homophobia can, for reasons of political expediency, be hurled by anyone, often including individuals or actors with practical attitudes towards the perspective of gender equality (Gerbaudo 2021, 225). More generally, social constructs such as gender and race constitute *foci* of discrimination and disadvantage, exacerbating the severity of the effects for already marginalised individuals, while contemporary power

hierarchies are being defined, often by suggestive but powerful symbolisms, such as false atonement and white guilt, in reference to what women and black people achieve in what is presumably the most challenging social environment for them (Mohan 2022, 77).

Special reference should be made to another field in which many significant changes with an obvious gender dimension have been observed, that of intimate relationships. One of the ways in which the pandemic and, especially, the initial phase of lockdowns affected the attitudes of individuals at the level of their intimate and sexual relationships is that of the return of former romantic partners as a possible re-connection (Christakis 2020, 181). The tendency to re-kindle past romantic relationships was due to the legitimate desire to communicate in a context of isolation in which, due to the highly stressful situation, individuals re-assessed their lives and, often, sought to establish relationships characterised by further emotional closeness.

In addition, as has been observed in past disasters and emergencies, marriage rates increase significantly after the end of intense events (Christakis 2020, 180). This is a situation which, in psychological terms, is described as the "misattribution of arousal" and constitutes the potential confusion between experiencing feelings of tension and alertness caused by a sense of danger and a feeling of erotic arousal and romantic excitement. In fact, because the state of confinement imposed in the first phases of the pandemic prolonged the process of getting to know one another, people had more time to develop intimate relationships characterised by slower timing and, therefore, greater opportunities for emotional openness, meaningful communication, and honest expression of feelings and thoughts, a situation which, according to Christakis, may lead to longer marriages after the end of the pandemic (Christakis 2020, 181–182). Thus, precisely because of the complexity of the relationship between extraordinary circumstances and attitudes in the field of intimate relationships, the impact of the pandemic on the way people treat others and behave in their personal and romantic relationships is an open question.

III. Gender Perspectives in Post-pandemic Theories

It has been rightly pointed out in the public debate that, in all likelihood, the biggest potential changes associated with the post-pandemic setting seem to be related to gender relations, especially in terms of social policies and working conditions for women (Capano et al. 2022, 5). This is because, without a doubt, gender inequalities played an important role in the reproduction and perpetuation of vulnerability both during and, most probably, after the health crisis (Ullah & Ferdous 2022, 81). The prospect, however, of the empowerment of women with a view to gender equality, which is a relatively recent ideal (Barnett 2022, 25), requires the precise identification of the gendered effects of the pandemic. It is, as has been mentioned, a broader social effort that entails an analytical mapping of what happened overall from a gender perspective, but it is also a subsequent attempt to integrate gender mainstreaming, in an intersectional manner,

in the formulation and adoption of equal opportunities policies and affirmative actions. For example, the perspective of closing the widening inequality gap may include a range of actions, measures and decisions, such as, for instance, prioritising support for rural women, small- and medium-size enterprise owners, and single mothers (Ullah & Ferdous 2022, 120).

In a similar vein, Stoesz (Stoesz 2021, 152) notes that, although women in the US have, for almost 40 years, been embarking on university studies at a significantly higher rate than men, they nevertheless still earn less. As he states, women entering the labour market have faced inadequate wages and working conditions all too familiar to minorities of colour (Stoesz 2021, 164). Thus, although some progress has been seen for a minority of women in the field of gendered workplace equality, he believes that the pandemic will ultimately exacerbate the existing inequalities, as younger people will continue to struggle with the loss of employment and educational opportunities caused by the pandemic and the resulting precautionary measures taken for a lot of time (Stoesz 2021, 174). A critical antecedent can be found in the highly-gendered digital divide, which has emerged as the new face of inequality, prejudice, and socio-economic marginalisation in the post-pandemic world, since, due to the additional dependence on digital technologies brought about by both the health crisis and, in particular, the period of lockdowns, it reveals, in a stark and direct way, the digital exclusion of one billion women and their families who do not have access to the Internet (Ullah & Ferdous 2022, 43).

It is in this context that Holden and Dixon (Holden & Dixon 2022, 9) propose a more general policy mix for the post-pandemic period, a democratic liberal approach that would combine ensuring the functioning of the free market, but with democratic commitments to defend individual rights and social interests. These policies, as they point out, can be "blue," i.e., take into account the interests of blue-collar workers, "green," i.e., be ecologically oriented, or "pink," in the sense of promoting gender equality, but also taking the specific circumstances of domestic care into account. This is a perspective which, according to them, can only be realised both within and in the light of liberal thinking, which can support various forms of economic re-distribution through democratically-instituted policies, so that the desired reform is preferred over wholly illiberal or non-liberal alternatives (Holden & Dixon 2022, 19). In this context, of particular importance are the principles of democratic liberalism and fair trade, which advocate, *inter alia*, decent conditions for all workers, and especially for marginalised ones, including women (Holden & Dixon 2022, 54).

In point of fact, the authors (Holden & Dixon 2022, 92) see the possibility of a universal basic income not lonely as a means of addressing severe poverty in the developing world, but also as a means of empowering women and their life prospects. Moreover, in their view, the most appropriate way of dealing with cases such as that of unemployed women and household care, especially where there are children, is to ensure that a wage can be established for their unpaid work and services, and that a corresponding system

of pension rights can be established (Holden & Dixon 2022, 96–97). In this context, universal basic benefits cannot only work in favour of household members engaged in domestic work, but can also be embedded in a framework of flexible employment that allows individuals not only to take care of heterogeneous households and children, but also to maintain a decent social minimum (Holden & Dixon 2022, 181).

It is clear that the above approach is, in essence, one of the many proposed changes that have emerged from the theories of the post-pandemic era, and relates to numerous interventions and policies that have taken place in the management of the recent health crisis by various states. However, according to Echegaray and colleagues (Echegaray et al. 2021: 106), during particular situations, such as the restrictive measures phase, governments can impose profound lifestyle changes, albeit only for a limited period of time. This is because fatigue from extraordinary circumstances leads, sooner or later, to a desire to return to the previous situation, and, therefore, has very limited potential to cause significant changes in attitudes and forms of behaviour. Indeed, they noted that, if we want to see substantive change, the alternatives should be more attractive, easy to adopt, and give people a sense of well-being. Thus, although all outcomes are possible due to the pandemic, e.g., widespread dissatisfaction, political instability and increased insecurity (Ullah & Ferdous 2022, 127), the focus on trying to return to a life as usual has been rightly highlighted, where, as Dodgen-Magee (Dodgen-Magee 2021, 184) stresses, as experts in our own normality, we will have ignored the multi-dimensional possibilities for change and opportunity that were, *de facto*, brought about by the plausible reflection on the apparently painful experience of the pandemic.

It is in this context that Christakis (Christakis 2020, 233) pointed out that, from the beginning of the health crisis, it is very likely that, after the critical phase of the pandemic, consumption, as liberal spending, will return more aggressively, just as happened in similar exceptional situations in the relatively recent past. He also noted that this increase in consumption would not take place alone, but would be accompanied by corresponding and similar social trends, such as the taking of more risks in people's lives, the further spread of a climate of sexual freedom, and, more generally, a spirit of *joie de vivre*. Indeed, referring to the famous example of the Roaring Twenties which followed the Spanish flu pandemic of 1918, he links various social developments of the 1920s, such as the widespread use of radio, the spread of jazz music, and women's suffrage, to the tropisms brought about by a post-pandemic period. Echegaray and colleagues (Echegaray et al. 2021, 37), however, are, as a matter of fact, rightfully concerned about a possible return to normality which, as they point out, will constitute a form of consumer revenge, which will favour a lifestyle strongly oriented towards material consumerism and intensified intimate relationships.

Nonetheless, in the broader public debate, it has been argued that the recent health crisis could be a first-class opportunity to re-think not only the relations between individuals, the state, and society, but also to re-define our current interpretations of

the set of modern values (Echegaray et al. 2021, 66). It is in this context that Barnett (Barnett 2022, 285) argues that younger people (Millennials and Generation Z) may feel the need for a plausible alternative to capitalism, as a way of life that opposes racism, supports feminism, and focuses on respecting identities. But how and in what way can there be positive social developments in the field of gender inequality, for instance? Ullah and Ferdous (Ullah & Ferdous 2022, 78) recall, here, a key premise of feminist thought, namely, that the empowerment of women, which can take many forms, is crucial to achieving gender equality. Of course, this is a perspective which, as the relevant historical trajectory of the feminist movement has demonstrated, is mediated by the participation, engagement and assertion of women on a range of issues that affect them, starting with the pivotal issue of labour and working conditions (Ullah & Ferdous 2022, 79).

As Barnett (Barnett 2022, 261) adds, the key principle for removing the multiple, layered and multilateral difficulties of the contemporary world is the strategy of shared empowerment, or, in other words, to follow and be inspired by the example of feminism and the Black Lives Matter movement. This pursuit of joint empowerment actions can help to highlight additional possibilities for the prospect of equality, freedom and justice, just in the same way that efforts to claim gender balance by feminism have revealed covert, latent or unintentional forms of discrimination, and difficulties and social pressures in relation to the way people grow up and socialise (Barnett 2022, 264). More specifically, he highlights how feminism, as an inclusive term that refers to all women's movements and all forms of actions to defend and claim gender equality, captures and underpins a wider social phenomenon that has shown us how, ultimately, deep and substantial social change can be achieved in gender relations (Barnett 2022, 261). The strength of its claims, its ability to incorporate dissent and different approaches, as well as its scattered and multidimensional form as an element of its adaptability, have led to more substantial and stable changes than various progressive legislative efforts. While he notes that patriarchy is far from being overturned, he stresses that the long revolution unfolding in this field should not be perceived as a form of procrastination or planning based upon phases and stages of implementation, but rather as a change that is pulsating. After all, as he points out, one of the characteristics of feminism is that, even in its most radical manifestations, it sends the message that the real overcoming of gender imbalance will not take place any time soon (Barnett 2022, 258).

For Barnett (Barnett 2022, 262), feminism inspires a method upon the basis that, although it is not oriented towards taking power, it is nonetheless not reformist in the sense of making disconnected improvements that weaken an overall project, but rather it projects and relentlessly pursues ongoing social transformation in the field of gender. No matter how progressive, feminist-oriented policies are distorted nowadays by state structures and political systems, and end up being the focus of opposition (Barnett 2022, 29), the success of feminism in highlighting gender inequality, asymmetry and imbalance is ultimately taken for granted and is inextricably linked to the broader trend of

acceptance of the idea of human rights, which the notorious pandemic has so emphatically brought to the fore (Barnett 2022, 120). Moreover, it should be made clear that feminism is, in principle, treated in the examined post-pandemic theories as a single and all-encompassing social movement, overlooking the internal variations in feminist thought and action, precisely because of intersectional difficulties, oppression and discrimination. This is, needless to say, a problematical aspect of the books in the selected sample that is reflected in the wider public sphere as well.

IV. Understanding the Dynamics of the Binary Sex System

The post-pandemic theories of the sample examined rely on a binary understanding of gender that aligns gender with biological sex and, furthermore, their analyses that explain how the pandemic impacted people disproportionately based on gender also rely on this same binary approach; consequently, ignoring the LGBTQ+ people who were impacted by the pandemic. In other words, these post-pandemic theories are characterised by a permanent and largely unmediated division between women and men; this is by a homogenizing categorisation, which is often accompanied, explicitly or not, by defining features regarding the two basic gender identities and the corresponding norms and attitudes associated with them. As I will try to show in this section from a rather social constructionist point of view articulated with a (neuro)feminist perspective (cf. Schmitz & Höppner 2014; Friedrichs & Kellmeyer 2022), the problem is not the naming and attribution of an identity as "woman" or "man", but the oppositional, dichotomous and essentialist approach to individual attributes as absolutely feminine or masculine, without even taking into account the respective historical, social and cultural context. This is because the subject in question is both expressed and functions through bodily hypostatized gender identities, which are defined dialectically and antithetically through the system of compulsive heterosexual perception, identifying women with the feminine and men with the masculine.

For instance, one way in which the system of compulsory heterosexuality is reproduced is through the cultivation of bodies as distinct natural genders, with their corresponding natural appearances and natural heterosexual dispositions (Butler 1988, 524). Thus, in the context of heterosexual morphology, gender is understood as a fundamental, binary difference that separates men and women. In other words, the binary sex system is dominated by the entrenched belief that there are only two sexes and that all people belong to only one of them (Dea 2016, 108). Everyone is assumed to be clearly either female or male, ignoring biological ambiguities (Digby 2014, 20). This is a heterosexual structuralism, which conceives of the two sexes as opposing, mutually-complementary units, which focus on body parts identified as the primary signifiers of gender differentiation, and, in the context of (hetero-)sexual grammar, inscribe themselves in a trajectory that culminates in the interconnection of their genitals (Paasonen 2006,

407).

According to Digby (Digby 2014, 12), however, the idea that gender can be reduced to a binary system is a cultural myth, since it must be taken for granted that the field of gender is fluid, diverse and ambiguous. Indeed, the American feminist philosopher rightly reminds us, from an anthropological perspective, that the dimension of the social construction of sex binaries becomes more apparent when we consider a number of societies (e.g., Mbuti, Semai, Siriono, Tahitians, and Vanatinai) where gender segregation is relatively minimal (Digby 2014, 10–11). This is, in any case, a dimension that also concerns other, larger societies, as Laqueur's (Laqueur 1990) well-known view of the one-sex model, which prevailed from antiquity to the 18th century, demonstrates. Of course, the focus on the dichotomous gender system, as well as the non-reflexive adoption of binary categorisation, does not imply a rejection of the thesis that women and men may differ in qualitative, rather than purely quantitative, ways (Del Giudice 2022, 29).

However, the gendered classification of many individuals in the same linguistic category essentially suggests aspects of similarity between them, which plausibly fosters an essentialist perception and a normalised gendered social reality (Pantelidou-Malouta 2013, 47). Thus, the ideologically-constructed gendered classification of subjects into one of the two closed categories of women and men contributes to the further reproduction and perpetuation of the belief that gender differences are natural and therefore immutable. In other words, the naturalised perception of subjects re-inforces the belief that inequality in the system of gender relations is not merely endemic but pre-social (Pantelidou-Malouta 1996, 168). The taxonomic character of the dichotomous approach, obscuring the logic of human uniqueness in the light of gendered collective difference and the consequent restrictive distribution of social roles, contributes to the perception and experience of otherness and bipolarity as authoritarian and hierarchical (Pantelidou-Malouta 1996, 162). In addition, the general and largely uncritical alignment with the dichotomous approach to gender as an un-negotiable condition, even if accompanied by an intention to challenge pervasive inequality, indirectly perpetuates gendered power relations, since its oxymoronic character of the aspiration to pursue gender equality for what had *a priori* been defined and prioritised as different and unequal (Pantelidou-Malouta 2013, 17).

It is in this context that feminist thought has been highly critical of the system of binary sex precisely because of its inability to be inclusive, and, therefore, to constitute a form of discrimination and a field of exclusion (DuBois & Shattuck-Heidorn 2021, 4), or, in terms of its most radical version, the gender duality is a patriarchal social construction that systematically and unfairly disadvantages those who are classified as women and undermines the freedom of those who are not considered as men (Dea 2016, 108). The effort to challenge the twofold gender categorisation, therefore, includes a series of socio-cultural practices that meet with strong reactions, such as the actions with regard to the visibility of people with gender expressions that do not fall within the binary system, the use of a more gender-inclusive language, mainly through the neutralisation

of pronouns, either upon the basis of reference to individuals or in the logic of multiple gender identities, and the adoption of certain state policies in this direction (Morgenroth et al. 2021, 731). Within this frame of reference, Angouri (Angouri 2021, 7) recalls that the tendency to de-construct any categorisation in the field of gender and the rejection of the thesis that individuals belonging to a social group can bear or share certain common characteristics inevitably leads to a relativistic individualisation that *de facto* undermines the articulation of a discourse upon the basis of the discrimination suffered by them and, therefore, reproduces the basic, structural dimension of the ideological system of sexism.

Nowadays, however, we are at a turning-point in late modernity where, although definitions of sex and gender include or arise exclusively in terms of social construction, genetic, gene, hormonal and secondary characteristics of gender are involved, sometimes in an essentialist way and sometimes in a constructivist orientation, in the defence and justification of binary sex or, alternatively, gender duality (DuBois & Shattuck-Heidorn 2021, 1–2). Binary sex, in other words, is a system of ideas and beliefs that, ultimately, has its basis in a biologically-oriented view of gender (Morgenroth et al. 2021, 731). Despite the focus of biologists and physicians on the gene composition of humans, chromosomes, hormones and internal or external genitalia to map fully and concretise and define biological sex precisely, no agreement has yet emerged on a categorical definition of it (Fausto-Sterling 2019, 530).

More analytically, for Mayer and McHugh (Mayer & McHugh 2016, 86), the concept of biological sex should be considered as being clearly defined, based upon the binary roles played by females and males in the reproductive process. The underlying basis for the distinction between female and male is the distinction between reproductive roles, with male impregnating the female and the female gestating (Mayer & McHugh 2016, 89). As Soh (Soh 2020, 18) clarifies, biological sex is either male or female, and, contrary to what is believed, is not defined by our chromosomes, genitalia or hormonal profile, but by our gametes, which are mature reproductive cells. In other words, according to Del Giudice (Del Giudice 2022, 4), from a biological point of view, what distinguishes the females and males of a species is the size of their gametes; males produce small gametes (e.g., sperm), while females produce large ones (e.g., ova). That is to say, humans should be considered a sexually dimorphic species (Soh 2020, 65), in which no intermediate types of gametes exist between the ova produced by females and the sperm produced by males. Dimorphism in the size of gametes, or anisogamy, is the dominant pattern in multicellular organisms, including animals and, therefore, humans (Del Giudice 2022, 4). It is primarily anisogamy and secondarily social behaviour that creates the conditions for the development of biologically-differentiated characteristics in the morphology of individuals.

To put it another way, the biological definition of sex is not simply a choice among many or an arbitrary preference, but depends on the existence of the two types of gametes, with chromosomes and hormones participating in the mechanics of biological

sex determination, but not playing the same fundamental role. Upon this basis, biological sex should, according to Soh (Soh 2020, 18), be considered as a non-negotiable binary, and should not be understood as a spectrum, since, as Del Giudice (Del Giudice 2022, 4) argues, it is a functional, rather than a statistical, dichotomy, which is not challenged by the existence of transgender dimensions, non-binary gender identities or other obvious intersex exceptions. Indeed, because this conceptual basis operates even when individuals exhibit characteristics that are not, phenotypically, typical of females or males, the binary approach to sex must be considered as tenable, as it reflects an underlying biological reality that is not belied by exceptions (Mayer & McHugh 2016, 93). It is upon this basis that it is considered that the binary nature of gender should not be understood as an illusion to be de-constructed, but as a "biological reality" (Del Giudice 2022, 3).

In this context, in the mainstream scientific debate, Joel's (Joel 2012, 1) conceptualisation of the 3G (genetic-gonadal-genital sex) model of sex stands out, according to which 99 per cent of people can be categorised as "female" or "male" based upon their chromosomal complement, gene composition and genital phenotype. However, for the iconic proponent of neurofeminism (cf. Bluhm, Jacobson, & Maibom 2012), although only the remaining 1 per cent of the population can be identified as intersex upon this biological basis, all individuals possess an intersex gender and brain, as they carry a range of female and male traits and brain characteristics (Joel 2012, 5). Thus, although the incorporation of intersex and transgender cases has contributed, within the context of human biology, to approaching sex in terms of a spectrum, for DuBois and Shattuck-Heidorn (Dubois & Shattuck-Heidorn 2021, 4), phenotypically (pre-)defined duality in the field of sex nonetheless remains the dominant categorisation, since it encompasses most people. To put it in another way, the 3G model of sex can formulate a gendered binary classification with non-overlapping and internally homogeneous categories, which can be used to address individual issues. For instance, although there is a need to challenge the *a priori* binary categorisation in a world with pervasive gender asymmetries and with insufficient knowledge of the experiences of both women and people who do not fall into the cis-gender heteronormative morphology, it my make sense to include binary sex based upon reproductive biology or gender identities in analyses in order to address certain questions in human biology. On the other hand, there is a risk that this twofold categorisation will reproduce the general assumption of a deep, totalising duality, thus, obscuring both biological variations and sociocultural influences on human physiology (Dubois & Shattuck-Heidorn 2021, 4).

More specifically, gender, as an individual identity, pre-supposes and entails both binary and social interactions that produce and frame cultural meanings of a gendered nature, such as the games and activities that children, adolescents and adults choose, are pushed to do or end up engaging in (Fausto-Sterling 2019, 548). In other words, the gendered dichotomy is reproduced through everyday life, given conversations and practices, as well as through all social representations, both in the private and the public

sphere (Braun & Wilkinson 2005, 519). This being so, perhaps the most important aspect of the binary sex system is, according to Morgenroth and colleagues (Morgenroth et al. 2021, 731), its social consequences, since it is a system that is not only descriptive, but also, at the same time, prescriptive and proscriptive; since it shapes a social context within which an individual's genetic phenotype, or even its chromosomal complement, prescribes the ways in which he or she is expected to develop his or her body, acquire the relevant male or female identity and act according to the corresponding male or female social norms.

According to Fausto-Sterling (Fausto-Sterling 2019, 533), there are many possibilities for the formation of embodied gender, such as the conscious or non-conscious adoption of habits with cultural characteristics and gendered connotations, and their incorporation into our neuromuscular system. For this reason, gender should be understood as a "biosocial sediment" that is gradually substantiated and has the body as the central axis, while, despite being considered to emerge naturally, it is actually shaped throughout an individual's life (Fausto-Sterling 2019, 534). This is, by all means, a dynamic approach to the field of gender, which, in one way or another, has been the subject of much academic and public debate. In this context, the concept of gender/sex is promoted as an inclusive term for the dynamic articulation and multidimensional interaction between (biological) sex and (social) gender, encompassing both the "innate/evolved" aspects of individuals and the socio-cultural dimensions (van Anders 2015, 1179–1782; Fausto-Sterling 2019, 532; DuBois & Shattuck-Heidorn 2021, 3; Morgenroth et al. 2021, 738). From this perspective, gender/sex is constituted as a system that is simultaneously subjective and intersubjective, in the sense that, in this articulation between the felt body and its developing set of skills, and the continuous physical and emotional feedback, an individual's identity emerges (Fausto-Sterling 2020, 328–329).

Although the use of the hybrid term gender/sex, as a way to acknowledge the inseparable confluence of biological and socio-cultural factors, it works to aid the critical and more flexible study of observable differences between women and men, this terminology has its own problems, since, on the one hand, the multidimensional collection of semi-independent characteristics makes the concept hybrid, fluid and non-dualistic, while, on the other, the same term is also used in the context of distinguishing, in a twofold manner, women and men as social groups (Del Giudice 2022, 3). On this account, the creation of a "unified concept of gender/sex" solves certain theoretical problems, but this conceptualisation does not, at the same time, offer a corresponding consideration of how the embodied substantiation of gender arises, because it requires the contribution of a number of scientific fields (Fausto-Sterling 2019, 534), a need which, without a doubt, makes the study of sex and the inclusion of the gender dimension in social/sociological analyses, just like the examined pos-pandemic theories, a further difficult, laborious and, ultimately, contentious endeavour.

It is in this context that DuBois and Shattuck-Heidorn (Dubois & Shattuck-Heidorn

2021, 12) point to common, uncontroversial practices in the study of gendered issues which need to be addressed with more thoughtfulness and analytical precision; these are, in turn, the automatic adoption of gender duality without possibilities of blending individual differences, comparative analyses based upon an unjustified according to the working hypotheses, the adoption of the binary sex classification, the invocation of gendered binaries to explain observed differences, rather than considering all antecedents and mechanisms as an explanatory method, and the *a priori* acceptance of the two main categories of women and men rather than attempting to explore research participants in relation to their gendered experiences. To put it in another way, gender expressions and gender identities can and should be examined in all their complexity, regardless of whether gender/sex is ultimately a biological binary system, since sex, as a categorical variable, is resistant to the presence of a small percentage of individuals who, for various reasons, are not easily classified or do not align with the relevant biological definitions (Del Giudice 2022, 4).

Timm and Sanborn (Timm & Sanborn 2016, 210) rightly note here that it is more useful to try to interpret or explain how physical and bodily differences between women and men produce dissimilar practices, forms of behaviour and roles, than to reproduce a myopic binary opposition. After all, we do not need to re-define the meaning and scope of gender/sex arbitrarily in order to facilitate the acceptance of people who are different (Soh 2020, 26). In other words, it is possible to accept that gender/sex can be binary without trapping people in essentialist and pre-fabricated gendered roles and stereotypes (Soh 2020, 71). A progressive way forward, then, in relation to the pendulum between binary sex and the fragmentation of gender identities can be identified in the dialectics of people's actual lived experiences and life stories, and their struggle to understand why things happened to them and what motivates them to live they way they do (Kiesling 2019, 32).

Whatever the case, there should not be a holistically-oriented view of gender/sex, with the risk of an entrenched essentialist dimension, but rather it should be approached as a premise that is articulated and manifested in the light of other identity categories, an approach that permanently requires the adoption of a broader and interdisciplinary perspective in order to attain a more synthesized view of gender, mainly by collecting data that includes participants' gender identity, gender expression, and their 'lived' gendered experiences (Campbell-Kibler & Miles-Hercules 2021, 52; DuBois & Shattuck-Heidorn 2021, 12–13). This is a project of sociological thinking which, for macro-analyses and studies that are based upon broader theorisations, as was the case with the examined post-pandemic theories, seems to lag seriously behind in shifting with the basic binary sex differentiation that remains the dominant gender narrative which obscures the facets of the differentiated gender experiences.

V. Concluding Remarks

The article aimed to identify how gender is articulated in some theories of the post-pandemic world which appeared, for the most part, in the beginning of the notorious health crisis. The overall finding is that, in the examined post-pandemic theories, gender is construed in dichotomic, and to a certain extent universalist, terms or, in other terms, an unproblematic reproduction of the biologically-oriented binary sex system characterised them. As a whole, gender was used as a synonym of sex, in the sense that gendered categorization was reproduced as dichotomous due to the fact that gender is constructed as a binary concept. This is a choice that does not advance the public debate on gender relations, since it *de facto* ignores and silences the multiplicity of gender identities and intersectional premises, while it neglects the gendered embodiness of experiences such as intimate partner violence. Some would have expected that the early pandemic experience and the prospect of a new and fairer world could have led the post-pandemic theories to conceptualize gender differently and more inclusively than in binary based analyses developed before the pandemic. Contemporary theorisations in the field of gender and queer studies, as well as several feminisms, constantly try to highlight this complex and thorny landscape which negatively influences the lives of LGBTQ+ people.

To all intents and purposes, recently gender research – a field contested on several fronts anywise – has been strongly challenged and increasingly attacked by individuals outside the scientific community who, in one way or another, are associated with the broader right-wing and various conservative religious forces (Engeli 2020, 227); as has been accurately said, as much as research in the social sciences is a product of society, so as well is its opposition a product of society itself (Engeli 2020, 233). These are attacks that are linked not only to the fact that gender is a component of the alt-right's attempt at a new conception of common sense, but also because, as a field of scientific research, it constitutes an evidence-based form of knowledge whose indications do not fit within the dystopian framework of meta-truth. Within this context, not only should the already existing, common sense conceptions of gender duality be further negotiated critically, as was the case with the post-pandemic theories examined, but also further attention must be paid with regard to how, and upon what basis, the binary sex system seeks to be (re-) highlighted as a self-evident reality.

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