

# Prescribing Race: No Blank Scripts for Using Race and Ethnicity in Health

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## *Abstract*

Recent research shows that the inappropriate use of race and ethnicity in healthcare leads to poor patient outcomes. Contemporaneous work shows that accounting for inequalities caused by discrimination often requires the use of race and ethnicity as variables that are mediated in their effects by discrimination along those dimensions of identity and/or classification. This suggests that the appropriateness of using racial and ethnic group descriptors depends on context. This paper explores some contexts in which the use of racial and ethnic group descriptors may be appropriate, and the limitations thereof. I begin my argument by interrogating whether it is best to use self-reported identities or externally assigned classifications for healthcare purposes. I argue that the use of these group descriptors should depend on their contribution to healthcare purposes. I end by arguing for the need to account for racial and ethnic intra-group heterogeneity in clinical care and public health policy.

*Keywords:* Colourism, Health disparities, Population descriptors, Racial classification.

## 1. Introduction: On the Concepts of Race and Ethnicity in Health

This paper deals with the use of race and ethnicity as population descriptors in health and the limitations of their use as variables in clinical and public health settings. The concepts of race and ethnicity have a controversial history in the health sciences. Under the typological thinking predominant in the modern period, races were thought to be biologically specific population groups and ethnicities were thought of as subraces or a collection of so-called tribes of even smaller nested sets of biological groups. This was a common motif in European ethnographic studies found in research and encyclopaedias produced in the 19<sup>th</sup> and early 20<sup>th</sup> century. Notable depictions of this typological view of races and ethnicities are the 1852 global map of ethnic divisions by Berghaus (Winlow 2020: 310-11), Martin's 1903

illustrations of global ethnic types (M'charek 2020: 371), and Meyer's 1885-1892 ethnographic map of the world.<sup>1</sup> Although the facts of biological diversity in humans undermine these modern views about races and ethnicities being biological groups, racial and ethnic classifications are still used as proxies for biological diversity and ancestry to this day (Tschirgi et al. 2023; Gannett 2014).

Whilst assuming a genetic basis to racial and ethnic classification, under a genetic hypothesis for health disparities, race and ethnicity are mistakenly used as proxies for therapeutically relevant aspects of a person's biological ancestry (Lorusso and Bacchini 2015; Gannett 2014). This use of race and ethnicity as biological proxies presumes various associations between biological ancestry and ethnic or racial group belonging that do not obtain. Where we have managed to collect evidence about race and ethnic group belonging in relation to biological heritage, presumptions about the association between ethnic and/or race group belonging and genetic ancestry relevant to therapeutic action generally do not hold (Tschirgi et al. 2023; Msimang 2021; 2020; Lorusso and Bacchini 2015). Moreover, the correlations that do hold between ancestry and social groups like races and ethnicities are minor and mostly arbitrary such that these correlations cannot be used as the basis for a biological taxonomy of the human species (Baker, Rotimi, and Shriner 2017) and they generally do not mark out clinically relevant biological groups in humans (Lorusso and Bacchini 2015).

All biological hypotheses about race in medicine and their assumptions about the biological basis of racial disparities in health have so far been found to be wanting (Graves 2023). This has led to the present scientific consensus that the biological and genetic hypotheses about race in medicine that claim race is a valid biological or genetic category are false (Amutah et al. 2021; Maglo, Mersha, and Martin 2016; Byrd and Clayton 2001). This conforms to the broader academic consensus that race is not a biological category (Graves 2018) even if there are attempts to carefully re-engineer biological realism to try to accommodate much weaker claims about the relationship between race and genetics (see Winsberg 2022). The lack of theoretical support for biological realism about race has caused the use of race as a biological variable in health to fall out of favour (Amutah et al. 2021) although how exactly race should be used in health remains a live question (e.g., see Lorusso and Bacchini 2023; Ntatamala et al. 2023).

Nevertheless, a rough consensus has formed about what racial terminology is about. This consensus is called the sociohistorical consensus (Blum 2010). This is not a consensus about the existence or nature of races—there is still a lively debate in this regard (e.g., see Msimang 2022b)—it is rather the recognition that people have adopted racial identities and have been assigned racial classifications through a number of social processes, and that this is what the language of race or 'race talk' refers to. The consensus is that these groups formed around racial classifications and identities are real social groups whatever else they may or may not be (Khalifa and Lauer 2021; Blum 2010). The consensus on this matter is that these groups—be they race groups (Msimang 2021) or racialized groups (Hochman 2021b)—are relevant to health.

<sup>1</sup> A reproduction of Meyer's ethnographic map from his *Konversations-Lexikon* (Meyer 1890) showing races and their supposedly nested subraces (still a popular illustration) can be found on Wikimedia: [https://commons.wikimedia.org/wiki/File:Meyers\\_map.jpg](https://commons.wikimedia.org/wiki/File:Meyers_map.jpg). Meyer's illustrations of faces representing ethnic groups of the world can be found in the same publication (e.g., see the illustrations reproduced in M'charek 2020: 371).

Despite the similar origins of the use of race and ethnicity in health, there has been less controversy and discussion about the use of ethnic classifications in this domain. Historically, this has let the use of ethnic classifications as biological surrogates pass with little interrogation and criticism. But the very same facts of human diversity, and how that diversity is distributed across human population groups, also undermine ethnicity as a biological category. Nevertheless, ethnicities can have closer correlations with local populations given their tendency to be defined in ways that cover smaller geographical ranges than races. Nevertheless, races and ethnicities rather than being biological groups are social groups that people can self-identify as or can be classified as a part of (Flanagin, Frey, and Christiansen 2021; Ross et al. 2020). The tension and possible differences between how a person may identify racially or ethnically and how they are classified socially along these dimensions of group belonging is a problem in health that I will deal with in §2 of this paper.

Races and ethnicities are groups shaped by social experiences dependent on local contexts (Ross et al. 2020: 319). What race and ethnic group concepts pick out on the ontological level depends on local contexts (Ludwig 2019). The result of this is that the groups racial and ethnic classifications delineate (and the meanings attached to them) are not always distinct (Balaton-Chrimes and Cooley 2022: 415). For the purposes of the argument I am making, I focus on cases in which racial and ethnic terms usually come apart (e.g., the country contexts of South Africa and the US). In such cases, racial and ethnic group belonging can have different socio-demographic effects in relation to determinants of health and group-specific disparities in health.

Race groups, in contrast to ethnic groups, tend to be thought of as the few groups which the whole of humanity can be divided up into. But how granular racial classifications should be conceived has always been a matter of dispute. Formulated in terms of the presently hegemonic US race discourse that was entrenched by modern “Western” political actors and race theorists, one such classificatory system is thinking of race groups as continental races (Tschirgi et al. 2023: 3; Jackson 2022: 9-10). The belief in the existence of races in this tradition is based on hypotheses about races being separate biological or evolutionary lineages that could be arranged hierarchically. But since there are no biologically or evolutionarily separate lineages in living humans, let alone any that are hierarchically arranged, the idea of there being biological races in humans has fallen flat for a lack of empirical support (Fuentes et al. 2019).

Some thinkers conceptualize races as groups *mistaken* to be evolutionary groups or biological lineages (e.g., as argued by Malinowska et al. 2022 and Hochman 2021a; 2021b). These kinds of views about race construe the concept of race as a hangover from modern and late medieval biological thinking about race. This may not be typical of how races are and have been thought of in the *longue durée* and in all contexts of contemporary society. This is because beliefs about races do not depend on beliefs about biology as studies in cultural racism suggest (Blum 2020), as studies of colourblind ideology show (Triguero Roura 2023; Milazzo 2022), and what a longer historical view of racial classification and thinking demonstrates (Goldenberg 2017; 1999). Most relevantly, “groups mistaken as biological lineages” is not how race in the context of racism is conceptualised as a variable in health (Phelan and Link 2015). Given that racism does not need a biological conceptual foundation for its effects in health, we should not think of

racess—particularly in their role in health—as solely those groups that have been mistaken for biological lineages.

A concurrent turn to biocultural and biosocial views is presently underway that formulates race and ethnicity in terms of scientifically observable extrinsic effects on a group’s biology and health (e.g., Pontarotti 2023). This has recently been done, for instance, by using “non-genetic biological effects, such as changes to gene expression patterns and changes in microbiome composition or function” to define race groups and race group belonging (Chellappoo and Baedke 2023: 14). But there are many routes under which people come to be socialized into (and out of) racial and ethnic groups—both in terms of how they may receive a socially assigned classification or may have come to self-identify (e.g., see Saperstein and Penner 2014). The approach I take defines races and ethnicities as social groups *that are affected* by environmental exposures such as those that cause changes in DNA methylation and microbiome composition or function rather than *groups defined by these exposures* and their effects (see also Meloni et al. 2022; Nieves Delgado and Baedke 2021). In other words, races and ethnicities are groups that are affected by discrimination and other effects but are not defined by those effects. The focus I give in this paper to ethnic and racial discrimination is due to the role these forms of discrimination play in health outcomes of ethnic and racial groups and not because discrimination is what defines them.

In this section, §1, I have framed how we are to understand ethnic and racial population descriptors in health. In §2, I will deal with whether we should use self-identified or socially assigned racial and ethnic classifications in health. I argue that on a balance of the costs and benefits, self-identified classification is to be preferred in healthcare settings. In §3, I discuss the challenges to clinical practice and public health policy posed by the internal heterogeneity of ethnic and racial groups. I illustrate these challenges through examples of health risks that pertain to subgroup populations within a race or ethnicity that are generalised in a misleading fashion to an entire race or ethnicity. In this, I use the understudied case of colourism to show that a narrow focus on (only) race and ethnicity in health disparity research can mask other variables that significantly contribute to disparities (even those that contribute to racial and ethnic disparities) in their own right. In §4, I summarise the case I have made. The moral of my argument is that we cannot give a blank script for the use of race and ethnicity in health; their use must rely on the utility of these concepts in achieving specific healthcare goals and purposes at the various levels of healthcare in which they may apply. I argue that different levels and functions of healthcare require different prescriptions appropriate to the healthcare activity in which the use of race and ethnic group descriptors is being considered.

## 2. Why Should We Use Self-Identified Race and Ethnicity rather than Assigned Classification?

Because of the health effects of racism and ethnic discrimination, it may intuitively seem like the race and ethnicity which a person is socially assigned would be what is of consequence in most health settings rather than the patient’s personal group identification. Racism, for instance, will mostly benefit or disadvantage an individual on the basis of the race *others* view them as belonging to rather than their own choice of self-identification (Roth 2010; Jones et al. 2008). Nevertheless, how an individual identifies can come with its own psychological

costs and benefits, depending on the context, and whether their identification aligns with how they are socially classified, treated, and perceived (and their level of awareness and patterns of response to how they are perceived and treated on these dimensions of identity). A health cost that an individual may face due to their racial identification is stereotype threat: an adverse psychological effect caused by confronting the negative stereotypes about the group identity a person holds (Aronson et al. 2013). If there is a conflict between a person's racial or ethnic identity and how they are classified by others, this can also cause various forms of psychological distress or discomfort (Monk 2021: 39; Campbell and Troyer 2011).

Both socially assigned classification and self-identified or self-reported identity, particularly in contexts of prejudice and discrimination, can be shown to have negative health effects and create or exacerbate health inequities. Nevertheless, some configurations of group belonging across identities and classifications have more dire health effects than others. In comparing self-reported and socially assigned classification, how one is perceived by others and the differential treatment that stems from this is what is associated with the most significant health disparities. Thus, discrimination (e.g., racism) as an exogenous factor is hypothesised to be the more significant driver of health outcomes than how a person may choose to self-identify (White et al. 2020: 12). Given these considerations, it is unclear why self-identified race and ethnicity are usually the standard form of population descriptors used in health.

It is not clear why researchers use self-identified race over socially ascribed race, or why others may choose the converse. For example, when arguing for the indispensability of race in medicine, Ludovica Lorusso and Fabio Bacchini argue that “only other- [externally assigned racial classification] or self-identified race grants clinicians epistemic access to the aetiology of [...] disease inasmuch as it depends on experienced racism or the epigenetic effects of racism as experienced by one's ancestors” (Lorusso and Bacchini 2023: 9). They argue for the importance of racial classification in health, but they do not make an explicit case for using self-identified race over assigned classification. Their argument is that “self-identified race is what we need to capture the complexity of the effects of present and past racism on people's health and investigate risk-related external and internal exposures, gene-environment interactions, and epigenetic events” (Lorusso and Bacchini 2015: 57). But self-identified race may differ from the socially assigned race an individual may have, meaning that self-identity can be misaligned with how a person experiences discrimination along these dimensions of identity. Lorusso and Bacchini argue for the utility of using racial classifications in health while assuming that self-identified categories are the appropriate kind of population descriptors for these ends with the proviso that we “should be prepared to dismiss self-identified races if we suspect that the inequalities caused by racism are reinforced rather than weakened as an overall effect of their employment” (Lorusso and Bacchini 2015: 63).

What is of interest to us at this juncture is that Lorusso and Bacchini's approach leaves open the question of why we should use self-identified classifications rather than socially assigned race. For the remainder of this section, I make an argument to support using self-identification in health over using socially assigned racial and ethnic group classifications on a balance of the benefits that the use of self-identified categories has over externally assigned ethnic and racial classifications. The case I make is that self-identification best meets our normative

and theoretical demands (§2.1) since self-identified race and ethnicity tend to have the appropriate kinds of correspondence to the exposures of interest on this dimension of identity (§2.2). In §3, I will look at the limitations of using these group descriptors in assessing risk, investigating health disparities, and directing or designing different kinds of healthcare interventions.

### 2.1 Normative and Theoretical Demands: Balancing Ethical Commitments and Practical Purposes

A number of normative and theoretical considerations need to be weighed against each other given the objectives healthcare workers may want to meet and the professional ethical values that they might hold. Healthcare workers such as clinicians may want to provide the best healthcare possible to their patients while respecting patient autonomy. Recognising and respecting how a patient identifies rather than imposing on record how a clinician presumes a patient is or should be classified could be one way to respect patient autonomy and work towards some aspects of equity. Fulfilling this ethical expectation may come at the cost of other clinical purposes such as recording the social group variable that is thought to most likely mediate a specific health outcome of interest in respect to a particular patient. This introduces possible trade-offs between some theoretical or utilitarian-based aims (e.g., getting at the determinants of health that affect a patient) and some of the aims of equity (e.g., respecting patient autonomy such as how patients choose to identify themselves).

This conundrum brings to the fore that there might not be any solutions that can perfectly meet all of our expectations for the uses of identities and classifications in health. Self-identification may have drawbacks that assigned classifications do not, and vice versa. Some utilitarian goals and other ethical expectations can be in conflict such that there are no perfect solutions but only trade-offs between options which meet some but not other goals or expectations satisfactorily. There is no running away from this dispute turning on normative and explicitly ethical considerations, particularly in the trade-offs arising in practice between value-focused decisions and utility-maximising purposes.

This tension between the use of classifications and self-identified identities is an understudied challenge in the medical literature and has received little philosophical treatment. Yet the decision to use either self-identified race and ethnicity or an assigned classifications can have significant impacts on patient care, satisfaction, and general health outcomes (White et al. 2020). This makes figuring out how we should be using such group descriptors an important issue, particularly in how data on race and ethnicity is collected, reported, and used in clinical reasoning and public health policy design.

The most common approaches to obtaining data about race and ethnicity in health are using the method of “direct observation [which is to attribute or assign a classification to an individual by what a health worker perceives], indirect estimation using geocoding or surname recognition, and self-report” (Wittmer et al. 2023). Each of these methods have limitations in different contexts. In the US context, for instance:

Observation [i.e., healthcare worker assigned race and ethnicity] is unreliable and can lead to underestimation of disparities. Observer-recorded data show systematic patterns of inaccurate race and ethnicity assignments, such as underestimating the

number of people who would self-identify as Hispanic. Surname recognition and geocoding is also inaccurate, especially for identifying Black or African American, American Indian, Alaska Native, and multi-ethnic [or multi-racial] individuals (Wittmer et al. 2023).

Because of these issues, “self-report of race and ethnicity is widely considered to be the most respectful and accurate method” for recording individuals’ racial and ethnic information (Wittmer et al. 2023). Although the self-reporting of race and ethnicity is considered the most respectful and accurate method of obtaining and using these data—a claim I give more reasons to believe in what is to follow—it nevertheless has its own drawbacks when it comes to reported racial and ethnic identities’ relationships to health outcomes. This can happen when self-identification does not match the socially assigned group identity or identities a person has. Their self-identification could be misaligned with how their group belonging pertains to health outcomes that are mediated by their social group belonging. The collection of this data about group belonging is supposed to be getting at these relationships, so such a misalignment between identities creates a problem for the healthcare purposes such data is meant to serve.

The only reason why belonging to some racial or ethnic group is of import in health settings is because of the relationship such belonging has with health-related outcomes and exposures. If race and ethnic group descriptors are (or become) unreliable in this respect, or if they are systematically misleading, then there would be good reason to question and discontinue the use of these group descriptors in such healthcare settings. But race and ethnicity retain their relevance and importance to health today because they continue to have strong associations to a plethora of risk factors and health outcomes (Lu et al. 2022) through various mechanisms such as discrimination and systemically unequal social status between groups (Simons et al. 2021) and *occasionally*—very rarely—because of their uneven statistical correlation at the population level with therapeutically relevant ancestry (Maglo, Mersha, and Martin 2016) in quite constrained contexts (Msimang 2021).<sup>2</sup> Even under conditions where race and ethnicity have some correlation with therapeutically relevant ancestry, it is important to keep in mind that race and ethnicity are markers of social identities rather than biological groups (Msimang 2021: 267). This is of critical importance in avoiding making unfounded inferences about the role of race and ethnicity in healthcare outcomes that pertain to such associations.

If a person’s self-identified race or ethnicity does not correspond to how they are predominantly classified by society in their everyday life, then there can be a disconnect between their identity and the social pathways to the health outcomes connected to how they are racially and ethnically treated by others (Roth 2010). This state of affairs does not automatically mean that it would be better for healthcare workers to decide for themselves what race a person is to be classified as in their patient assessments. Putting to one side the normative goal of respect for a moment, to meet utilitarian purposes racial attribution or assignment determined by healthcare workers would still have to be shown to be more reliable in their connection to the phenomena of interest than the self-reports that patients

<sup>2</sup> Because race and ethnicity are poor proxies for biological variables, it is better to ask patients strategic questions that relate to ancestry when considerations are being made that relate to the role of ancestry to health (Msimang 2021).

give. Even on utilitarian grounds alone, the benefit of third party attributed classifications by healthcare workers would need to be demonstrated to be superior to self-identified classificatory use.

Leaving it up to healthcare workers to decide what race or ethnicity a person is to be recorded as would be to depend on healthcare workers' intuitions and biases about group belonging. This is because any given healthcare worker might not have all the relevant data on how their patients are perceived by society in general, or at least in the specific communities in which their patients live. Healthcare workers' assignment of race and ethnicity to patients would thus have to rely on the stereotypes respective healthcare workers hold about social group belonging. This would vary across individual healthcare workers and could lead to more inconsistent records of group belonging, undermining the clinical utility and purpose of collecting such data.

An anonymous reviewer has raised the point that some healthcare workers may have better expertise than others in making these kinds of judgements, particularly healthcare workers who belong to the relevant communities in question. They worry that this may have some consequences for whether we should use healthcare worker assigned classifications. They further suggest that some healthcare workers may even have the epistemic authority to validate or undermine the testimony of a patient who wishes to identify or not identify themselves as part of a specific group.<sup>3</sup> What I argue in this respect is that although healthcare workers like clinicians will have differing expertise in being able to "tell" (i.e., *guess*) what group a person belongs to, this does not give any healthcare worker the epistemic authority to determine what race or ethnicity a patient belongs to. It is due to the imperfect information the healthcare worker is bound to have, combined with the even more important evidence of the tendency for self-identification to correspond with socially assigned identity (see §2.2), that I will conclude that using self-identified race should be favoured over externally-assigned classifications by healthcare workers.

As race and ethnicity are social group classifications, it is not possible for any single person to completely validate or undermine the testimony of a patient's group belonging (even if such a person accepts or rejects such testimony). This is because the truth of whether a patient belongs to a particular group depends on facts an individual like a healthcare worker may not have access to and may not

<sup>3</sup> The anonymous reviewer seems to be suggesting that belonging to specific groups may confer epistemic advantages in being able to judge the testimony of a patient, perhaps also depending on what group the patient belongs to or is claiming to (or not to) belong to. This is related to the more general claim in the Standpoint Theory literature that belonging to an oppressed group confers an epistemic advantage to the oppressed *in principle*. Although it can be more likely for an appropriately positioned person to have more relevant knowledge about oppression given their positionality, it is not in principle the case that this knowledge is unavailable to others unless we are speaking about knowing what it is like to be or feel oppressed (Dror 2023). In the same way, one may be in a better epistemic position than someone else in respect to knowledge about a person's group belonging because of the knowledge such a person has been exposed to because of their positionality or life experiences. The case I make here is that belonging to a specific group and having certain life experiences, whether or not it gives an epistemic advantage in respect to judging the truth of a patient's testimony, is insufficient to establish a healthcare worker's epistemic authority about group belonging in the sense of making them the ultimate arbiters of what a person's identity is in healthcare settings.



be in a position to appropriately adjudicate. These are such facts as how the patient is perceived by the community in which they live, how they are treated and categorised in that community, how their own identity has formed in relation to their community and environment over time, and so on. As individuals, healthcare workers will have varying knowledge and access to the relevant facts that shape or inform group belonging that would make a patient's testimony about group belonging more or less plausible. Although healthcare workers will have different kinds of expertise in being able to *guess* what group a patient is a part in the community in which the patient lives, what I stress here is that healthcare workers' inferences are ones that will always be based on limited information that can only be corroborated or undermined by patients' actual experiences in the societies in which they live. These factors are (mostly) external to the judgement or determination of a healthcare worker like a clinician. Having no direct access to the judgement of society or all the relevant experiences of the patient that have shaped their group belonging (and identification), the healthcare worker is not in a position to make a definite determination of the group belonging of their patient despite their varying confidence in making such determinations depending on their experience and the cases before them.

Since healthcare workers will have varying expertise in this domain, and since belonging to a specific group or community does not necessarily give a healthcare worker epistemic authority on any given case, it is more responsible to defer to the testimony of the patient as a standard practice. This is both for the reason of respect for the patient's autonomy and because of the practical limitations of depending on inconsistently skilled healthcare workers to make these kinds of determinations. In §2.2 I will expand on the empirically-based reason why we should generally trust the self-reported identity of a patient. Before addressing this point, I want to deal with another set of concerns raised by the anonymous reviewer.

The anonymous reviewer also asks the important question of what ethnic and racial categories *should* be available to patients, and who has the power to decide these matters. In most countries, there are formal institutions that decide what categories are available for use in public institutions like hospitals or universities (e.g., van Staden et al. 2023). This does not answer the question of whether a patient should be able to create their own new racial or ethnic categories of identification, and whether the options that are available are justified and appropriate for the purposes for which they are being used. Why should data collection practices for ethnic and racial groups not be left as open response items not constrained by any lists from which patients are encouraged to choose?

The answer to the question of what categories we should be using in health is constrained by the purposes to which these categories and classifications are meant to be used. When the purpose of collecting data in terms of these categories is to track group belonging as it relates to specific exposures or health-related demographic outcomes, this limits the interests of healthcare workers to categories which feature in those kinds of sociological group schemata. These would be identity groups that can be shown to have social and/or scientific recognition in marking out groups relevant to specific phenomena (e.g., in the sense of Kincaid 2018). In respect to issues of health equity related to historical injustices such as ethnic and racial discrimination, the categories which we begin with will be those that name the groups that have been the victims of such discrimination so that we can monitor and evaluate changes in those groups' health outcomes (Msimang 2021).

Of course, new groups which relate to the health phenomena of interest can emerge and old groups can fade away. Groups can eventually fail to pertain to any clinically relevant phenomena in this sense. This dynamic requires that the categories in use in healthcare be periodically revised in line with socio-demographically detectable changes. Groups that are yet to have any social traction in this respect, or that are yet to be confidently associated with any group-level health-related phenomena, and that are not group identities relevant to issues of social equity, would not be relevant for this kind of use in health.

For *self-identification* in terms of racial and ethnic groups *to be useful* in clinical settings, it must correspond appropriately to groups of clinical interest and consequence. When self-identification does not align with those racial and ethnic groups of clinical interest and consequence, the clinical purpose of collecting such data is questionable. When socially assigned group classification does not match self-reported group belonging, self-identification will not track race and ethnic group-specific environmental exposures (e.g., discrimination based on the racial or ethnic group others think the person belongs). When third party assignment or attribution of group belonging by an individual healthcare worker does not correspond to how a patient identifies, the patient might not feel respected. Moreover, when the healthcare worker's assignment of group belonging to the patient does not match up with how the patient is socially seen and treated, this defeats the purpose of recording racial and ethnic group belonging for its effects on health outside of that healthcare facility. Although the healthcare worker's assignment of race and/or ethnicity can unfortunately affect the quality of care the patient will receive at that healthcare facility (Hamed et al. 2022: 10-11), it might not track how that patient is perceived and treated outside that facility—it might not track how these aspects of the patient's group belonging generally affects their health. The potential for this misalignment between self-identification and social classification creates a problem for which we need an answer if we are to continue to use racial and ethnic classifications in health in an intellectually justified fashion. This is the question I now turn to address.

## 2.2 When Self-Identification Follows Social Classification, Self-Identification Meets Our Ends Best

There is reason to suspect that the lack of correspondence between self-identification and socially assigned classification is low, but the rates at which there is a mismatch is something that would need to be established for the various combinations of classifications and identities that are used in any given community. For some communities, this mismatch may be relatively higher than other communities given the specific socio-demographic characteristics of the groups in question (Alba, Insolera, and Lindeman 2016; Roth 2010). When there is a strong correlation between the identities people take on and the classifications they are assigned in a community (for good or bad reasons), the risk of misalignment between self-reported identity and health-relevant exposures that relate to how a person is socially classified and treated is low. I will complicate this picture when I look at what conclusions we can draw about individual risk from such patterns as they relate to group belonging in §3. In this section, I show through argument that there is generally a close association between how people tend to self-identify and how they are socially classified.

To achieve my stated purpose for this section, I review some evidence showing that strong correlations exist between racial and ethnic self-identification with their corresponding socially assigned group classifications. I give reasons that suggest that we can expect strong correlations between identities and classifications in this sense to be the case across numerous societies. The evidence I will base my argument on shows that “how individuals publicly identify is powerfully shaped by the norms of the time and place in which they live,” particularly in terms of racial and ethnic belonging (Saperstein and Penner 2014: 188). This will support the common observation and theoretical expectation in the literature on group belonging and identity that “people calibrate their self-identification in accordance with how they are perceived by others” (Saperstein and Penner 2014: 186). This is known as the theory of the looking-glass self (Yeung and Martin 2003)—the theory that a person’s sense of self-identity is strongly informed and shaped by how they believe others see them.

What I argue in this respect is that self-reported race and ethnicity is linked to health-relevant exposures because self-reported identity tends to follow how a person is generally classified by others. Knowing what causes self-reported race to follow socially assigned classifications can help us to construct better accounts of how identity comes to correlate with classification over time even in cases where they begin as discordant (and vice versa). Latinx youth that have recently moved to the US are an example of this where their social identities at first do not tend to match up with how they are classified in their new social context. Researchers have recently shown that such Latinx youth change their racial and ethnic identity over time to conform to “how they think they tend to be (and most likely are) perceived by others” (Irizarry, Monk, and Cobb 2023: 37). Researchers exploring this phenomenon have coined the term “the sedimentation of the colour line” for the mechanisms that lead to this change.

The concept of the sedimentation of the colour line is a formulation of the theory of the looking-glass self that focuses on the specific role of various stereotypes, racism, colourism, and other forms of prejudice and discrimination in the US in creating conformity between classification and identity. “Instead of the metaphor of *fluidity*, which suggests a considerable degree of latitude”, this research speaks of the *sedimentation* of the colour line given how bureaucratic options and discrimination limit and influence decisions to identify as one group or another “including the compulsion to identify ethnoracially as opposed to opting out of ethnoracial [viz., ethnic and racial] categorization altogether” (Irizarry, Monk, and Cobb 2023: 39). Although formulations of the looking-glass theory of self can account for the majority of the correlation and change in respect to ethnoracial identity and classification, “other perspectives, including those that stress the persuasive power of racial performance, are necessary to fully understand temporal changes in racial identification and classification” (Saperstein and Penner 2014: 187).<sup>4</sup>

This empirical data showing socio-demographic trends in classification and identification support Lorusso and Bacchini’s claim, at least in terms of the experience of discrimination that is associated with how a person identifies, that “patterns of racial self-identifications on one side, and patterns of risk-related exposures and epigenomes on the other side, constantly coevolve and tend to match

<sup>4</sup> These perspectives would also be important for being able to account for the phenomena of passing and the health consequences, including other affordances in life, it may have.

each other” (Lorusso and Bacchini 2023: 56). It is via this route that we can conclude that “self-identified races can be useful proxies for risk-related exposomic and epigenomic variation, since patterns of racial self-identification and patterns of risk-related exposomic and epigenomic variation consistently tend to match each other” (Lorusso and Bacchini 2015: 60).

Lorusso and Bacchini’s argue for the use of race as a proxy, albeit as a proxy with a focus on environmental exposures and epigenetic effects rather than as a proxy for genetic variables (Lorusso and Bacchini 2015). Although the use of proxies in clinical settings is often practically unavoidable, I follow Msimang (2021) who has argued that proxy variables can, at most, only act as pragmatic stop-gaps for actual variables of clinical significance. Extending this argument (that it is always better to get as close to the difference making variables as is practically possible), I will now show how using race and ethnicity as proxies for the exposome or any specific environmental exposure can have serious problems and limitations that are relevant to clinical reasoning, medical practice, and the design of public health policy.

### 3. The Context-Specific Effects of Group Belonging: Different Experiences of and Positionality in Race and Ethnicity

Lorusso and Bacchini (2015) argue against race-based studies which assume a genetic hypothesis as the default explanation for inequalities in health between race groups. This is because race makes for a bad proxy for genetic traits and, moreover, genetic traits that are of clinical significance for most health issues such as complex diseases are not racially or ethnically distributed. Lorusso and Bacchini (2015) contrast approaches that make racially differential genetic assumptions with what they call “race neutral studies” which do not make such assumptions about the correlation of race with health-related *genetics*. Race neutral approaches are meant to look for associations uncovered from experimental evidence rather than assume what they are. These race-neutral studies provide “evidence of the primary contribution of the exposome and the epigenome to the risk of complex diseases in the general population, thus supporting the family of environment-based over the family of gene-based models” (Lorusso and Bacchini 2015: 59-60). In this way, Lorusso and Bacchini link race and ethnic identity as mediated by discrimination to environmental exposures or the exposome and epigenome. In their analysis of race-neutral studies, Lorusso and Bacchini conclude by advocating for the use of race as a proxy for an individual’s entire exposome and epigenome rather than their genetics. They claim that “racism is the main factor shaping the observed biological differences among self-identified races” although they do not claim that “racism is the only factor” (Lorusso and Bacchini 2015: 62). Their position is similar to the biosocial and biocultural approaches to race that I have taken as a point of departure (see also Meloni et al. 2022). Rather than being race neutral, this view can be seen to replace a genetic hypothesis about the role of race in health with a social hypothesis about the role of race in health disparities.

The problem I draw out here in respect to using race and ethnicity as *proxies* to an individual’s exposome and epigenome is that risk for a racial or ethnic *population* will not necessarily tell us anything informative about the risk faced by any *individual* ethnic or racial group member. This can translate to a need for a difference in reasoning at the public health policy level which may focus more on

population-level interventions and a difference in reasoning at the clinical level where the focus is on the treatment of individual patients. Because of the differences in the levels of intervention and analysis, there can and sometimes *should* be different recommendations made for population-level interventions versus interventions made at the level of the clinic in respect to the treatment of an individual. A practical example of this is the difference between the reasoning relevant to deciding the differential distribution of public health resources in accordance with disease burden and need across regions or particular population groups contrasted with the reasoning relevant to laboratory or patient-facing clinical practice in which personalised assessments are to be made in terms of the characteristics of the individual patient rather than the group(s) to which they may belong. How I broach this issue here is through looking at how the internal heterogeneity of racial and ethnic groups should affect clinical reasoning in light of—and despite—broader group trends.

For any health condition dependent on specific environmental exposures, there will be members of social groups who will not have had the relevant environmental exposures or who would have been affected by these exposures at a different intensity to other members of their group. There will be members who would have only been minimally exposed, and for whom there might not be a similar risk for the exposure in question as compared to other (or the average) members of their group. It is almost always, in fact, only subpopulations for whom it is true that there is a special risk since it is almost always only some or not all members in those groups who will have had the relevant environmental exposures to have a special risk profile. This poses a problem for the use of race and ethnicity as proxies for social determinants of health (Msimang 2021) and this use of race and ethnicity as proxies can become even more problematic in cases assessing subgroup and individual risk.

I will now give two examples to illustrate the problem of using race and ethnicity as a proxy to environmental exposures: I show in §3.1 how toxic exposures depend on spatial factors that lead to differential exposure *within* a race or ethnic group, and in §3.2 I show how the internal heterogeneity of races and ethnicities in terms of skin complexion in respect to colourism can be of even greater effect than inter-racial and inter-ethnic disparities. I will show that this can be the case even where the root cause of the disparity is still racism. This highlights the general insight of the importance of disaggregating data along other relevant lines of group belonging in this and other domains. My argument aims to undermine the claim that either racism or ethnic discrimination will always be the main or biggest factors shaping an observed health disparity among social groups. Racial and ethnic discrimination are, nevertheless, the main contributors to many health inequities documented in the literature (Phelan and Link 2015). Such discrimination can also be where disparities that are not clearly racial or ethnic in proximal realisation in the present originate (see Msimang 2021: 272-75). Thus, the argument I am making in this section should not be used to downplay the seriousness of racial and ethnic disparities in health. The purpose of my argument here is only to highlight the importance of racial and ethnic health disparities in relation to other disparity-driving variables that can be just as important—or of even greater effect—than race and ethnicity, but which do not receive an appropriate level of consideration given the magnitude of their effects.

### 3.1 Subgroup Specific Effects and the Spatial Distribution of Risk

The usefulness of racial group descriptors in health will depend on whether there is an alignment between racial identity/classification, health-related mechanisms, and health outcomes. One such mechanism that leads to differential health outcomes is racism. What mechanisms are at play and what their effects are can only be established on a community-by-community basis and such results might not be generalisable across different community settings. Nevertheless, the effects of racism in particular in creating differential health outcomes across communities is well-established (Hamed et al. 2022). This could make us overlook the fact that communities may have different sets of relations between identities and other variables relevant to health outcomes of interest. For example, among Blacks in the US, the difference in ethnic group or place of origin has effects on how the individuals and the groups which they belong are socialised. The result of this is that some Black ethnic groups cope better against the effects of racism in the US than others, leading to within-group disparities in life outcomes such as in health. This is the case with Caribbean Blacks in the US with certain demographic characteristics: it is hypothesised that they have lower rates of hypertension and related diseases than African Americans in the US because of how they deal with the anti-Black racism targeted towards Black people in the US (Nguyen et al. 2022). These within-race group disparities can also come about as a result of differences in the levels of exposure to racism, and not just how groups are differentially enculturated to deal with racism. Factors such as diet, class, and levels of education also attenuate or mediate such risks and outcomes.

It is common for disparities in health and life course outcomes to have their roots in differences in levels of exposure to health-relevant features of the environment. This can be due to spatially distributed toxic exposures that correspond to racial and ethnic segregation (e.g., Sampson 2019: 14-15). These toxic exposures have differential effects on subpopulations of racial and ethnic groups depending on where they are located in terms of that exposure. This is how certain ethnic and racial groups that are overrepresented in jobs like mining and the communities that live around mines are at radically higher risk of developing lung disease than other population groups (Knight et al. 2020; Nkosi, Wichmann, and Vuyi 2015). In South Africa, Black people are overrepresented in dangerous mining occupations and almost exclusively make up the population groups living in communities in close proximity to mines due to segregation and the long history of the political economy of mining in South Africa. This increases the risk of lung disease for the average Black person and could make it seem as if it is being Black in particular that makes the risk of lung disease higher. But the individuals who are actually at higher risk are those of certain occupations and those living in close proximity to mines. It is Blacks that are overrepresented in these situations that are at special risk to lung disease. In this case, this racial correlation between risk and social group belonging is not by coincidence but is a direct result of historically contingent socio-political and structural features of South Africa (i.e., the racist basis of the tradition of segregation and the procurement of labour for mining in the country).<sup>5</sup>

<sup>5</sup> Mining in South Africa is a heavily racialized industry which has relied on a system of Black “migrant” labour for more than a hundred years. In the South African gold mining industry, by “the end of the first decade of the twentieth century [...] blacks outnumbered

Another example of this issue of population level differences that translate in subgroup specific ways that might not apply to all members of the group in question is lead poisoning. I take the Flint Water Crisis as an illuminating example of this—both in its US context and in terms of the problem of lead contamination on a global scale. The Flint Water Crisis was a situation in which the residents of Flint, Michigan, in the US were exposed to relatively high levels of lead in their tap water between 2014 and 2019. High levels of lead exposure are strongly associated with a variety of serious health problems,<sup>6</sup> with the problem of lead poisoning being far worse in low- and middle-income countries like South Africa where about half of children meet the threshold for lead poisoning of 5 µg/dL (Ericson et al. 2021: e150). The vast majority of children in South Africa and other low- and middle-income countries meet the updated Centre for Disease Control (CDC) blood lead reference value of 3,5 µg/dL for lead poisoning.<sup>7</sup> This should also be considered a crisis.

Relatively higher levels of lead exposure for US averages (which are lower than low- and middle-income countries) are strongly associated with being Black in the US. Risk to lead exposure and poisoning is concentrated in the neighbourhoods in which Black people live in the US. This has been the case historically and during the recent Flint Water Crisis (Karp 2023). The risk of dangerously high levels of lead exposure is not only associated with race and neighbourhood demographics, but it is also associated with specific material conditions. These include factors such as how long water remains in lead pipes before it is consumed, how old the house (specifically how old the pipes are) out of which the water is being drawn and drunk, and risk in this case is also influenced by variables such as the level of poverty of the individual and neighbourhood in question which will affect whether a person can buy bottled water instead of consuming tainted tap water (Sadler, LaChance, and Hanna-Attisha 2017).

More specific than race and neighbourhood level effects, the crisis in Flint shows how particular aspects of the built environment (at the level of people's home plumbing) and how much money they have changes levels of risk to lead exposure. Flint is predominantly Black and "the majority of residents live at or below the federal poverty line" (Day, Seeger, and McElmurry 2019: 358). Black people in Flint who are more privileged than the average Black person in Flint by living in newer homes (with newer—presumably non-lead—pipes) and being financially better off, for instance, would have less risk to lead exposure than the average Black person in Flint. In terms of this environmental exposure, risk can cut across race because of how it depends on the material conditions of the individual such as their wealth and the age of (the pipes within and leading to) their home. This could be a motivating factor to also disaggregate data by socio-economic status or class. Global data about the disparities between low- to middle-income countries compared to upper- to high-income countries suggest the same (see Ericson et al. 2021). The risk for a Black child in the US during the Flint

whites by between seven and ten to one" (McCulloch and Miller 2023: 36). Black people have a long history of overrepresentation in the lower rungs of mining labour and its associated health risks.

<sup>6</sup> See Wikipedia for an overview of the health effects of lead poisoning: [https://en.wikipedia.org/wiki/Lead\\_poisoning](https://en.wikipedia.org/wiki/Lead_poisoning)

<sup>7</sup> The CDC blood lead reference value for lead poisoning was lowered from 5 µg/dL to 3,5 µg/dL in 2021. This change was announced on the CDC's website. See <https://www.cdc.gov/nceh/lead/news/cdc-updates-blood-lead-reference-value.html> (accessed 6 May 2023).

water crisis, for instance, is considerably lower than the average risk of a Black child in South Africa.

In highlighting a socio-economic dimension to risk in these cases, what must not be downplayed is the role of racism in creating the conditions in the US and South Africa where disadvantage is concentrated in Black communities. Black people in these countries have higher exposure and risk to lead poisoning on average because of the structural features of the distribution of disadvantage that are linked to a history of racism against Black people as a demographic. The proximal realisation of this disadvantage as seen, for instance, in the role of economic class is shaped by upstream historical features of social life such as the historical practice of redlining in the US (Karp 2023) or the White supremacist political economy of colonial and apartheid South Africa (Msimang 2022a; Bundy 2020). Like the case of lung disease in South Africa, the concentration of disadvantage in Flint among Black people is not accidental but a consequence of racism and its effects—both historical and contemporary. Dealing with and eliminating such health disparities in sustainable ways would require undermining how various social and structural impediments (such as economic marginalization, subjugation, inequality, and present-day discrimination) perpetuate continued demographically concentrated disadvantage among Black people. In other words, dealing with these kinds of issues in health requires undermining the racist conditions that create differential life chances for these groups in the first place (consider Dladla 2023: 47-52 on the South African case; see Phelan and Link 2015 on this issue more generally).

What the examples I have explored here show is that the within-race group differences and across-race group differences or similarities to exposures can be determined by the same proximal factors that cut across race (e.g., poverty, the built environment) that a healthcare workers' attention should be drawn to in their clinical assessments of risk. Nevertheless, the reasons why these risk factors are concentrated within certain groups rather than being evenly or randomly distributed across them can be because of broad population or demographic level effects caused by the living legacy and/or contemporary practice of discrimination. This kind of problem requires some interventions at the demographic level through the use of instruments such as public policy. This kind of intervention requires the targeting groups, going beyond the consideration of just individuals or the education, training, and practice of individual clinicians. Such a structural issue cannot be solved at the level of the clinic alone but needs broader multi-level interventions. Making a difference to these health inequities may require making radical socio-political and economic changes (Dladla 2023: 47-52). The need for making socio-political and economic changes to reduce the incidence and burden of disease across populations, particularly in efforts to minimise disparities, has been argued for in respect to the rates and incidence of asthma in the US (Kalewold 2020: 40-41) and the differential effects of the COVID-19 pandemic (Ezell et al. 2021) among others. The same could be argued in respect to the incidence of silicosis as an occupation-related lung disease in South Africa (data for this argument is suggested by Knight et al. 2020: 4-5).

What breaking down data beyond looking at average risk across groups allows, especially groups as heterogeneous as ethnic and race groups, are better targeted interventions that focus on the individuals and groups worst affected (see Valles 2012). At the level of making population-focused interventions such as in resource allocation or policy design, knowing that certain communities are



disproportionately at risk—especially if this risk is structurally or systemically determined—can help committing resources to where they are needed most and help change the systemic and structural factors that lead to the observed negative outcomes. This can help with the goals of health equity and meeting the needs of underserved communities. At the level of the individual patient, the disaggregation of data helps the clinician identify what features put individual patients at risk to health-relevant exposures. Information about patient identity group belonging might not provide such information that can inform or determine individual risk in a clinical setting even if such group belonging is relevant to some broader demographic trends. The moral of the cases I have discussed in this section is that public health strategies and guidelines can use group belonging like race and ethnicity to identify broad demographic groups most at risk, but they should also be designed to make accommodations for the heterogeneity of risk within racial and ethnic groups. The former can be useful for resource allocation strategies or meeting the aims of equity on the demographic level, and a detail-orientated understanding of the latter will be of importance for individual-level interventions, mechanistic research, and clinical practice.

### 3.2 Colourism Signals the Importance of Inter-Group along with Intra-Group Disparities in Health

The internal heterogeneity of racial and ethnic groups makes a difference to their health outcomes even when these differential outcomes are also mediated or driven by racial and ethnic discrimination. An understudied but significant example of this are the effects of colourism to the health outcomes of racial and ethnic groups (see Monk 2021). The effects of colourism can cut across groups of people of different racial and ethnic belonging from around the world depending on the differences in the complexion of their skin (Davids et al. 2016).

Colourism is the ideology and practice of differentially valuing and treating people on the basis of the complexion of their skin. In the South African and US context, along with many other former modern European colonies, the forms of colourism which are endemic are a direct consequence of—and are closely related to—White supremacist racism (Blay 2011). The hierarchy of valuation under White supremacy mirrors racial hierarchies in which lighter skin complexions tend to be favoured and darker skin complexions tend to be disfavoured. There are other societies in which colourism is a major problem that have a different pedigree or history for these skin preferences. An example of this is India where, although British imperialism and its imposition of White supremacy influence the colourist social hierarchies there today, light-skin preference has ancient roots connected to pre-colonial cultural values and the problem of caste (Kullrich 2022).

Many health disparities arise from colourism. Some of these are the poor mental health effects it engenders for darker skinned people. This is particularly a problem among, for instance, African American women (Hargrove 2019). Women from Black African and Indian population groups in South Africa face similar issues with concerning rates of the use of damaging skin lightening products (Davids et al. 2016). The use of skin lightening products is a global health problem affecting people from different races and ethnicities across the world. This problem is more concentrated in men on a global scale (Sagoe et al. 2019) and affects women in higher proportions in some local contexts like the US (Hargrove 2019). Colourism generally results in lower incomes and lower social

mobility for dark-skinned people across the world (Adames 2023). Colourism has differential effects along a continuous spectrum of phenotypic difference within and across social groups (Monk 2021: 37) whereas the effects of racial and ethnic discrimination are more categorical.

One demonstration of this difference in effect between colourism and racism comes from the systematic errors of pulse oximeters that overestimate the blood oxygen level of patients with darker skin (as it would with any condition that “darkens” the surface under the nail from which pulse oximeters make their measurements). Despite the systematic errors of pulse oximeters being discussed in the literature as another instance of how *racism* effects health (e.g., Liao and Carbonell 2023), this case could be characterised as demonstrating how *colourism* effects health. This is because the explanation for the disparities in accuracy in measuring blood oxygen level are specific to the “darkness” of a patient’s skin tone (or relevant fingernail features), unlike the racist effects of race adjustment algorithms which remain the same whether one is a lighter or darker member of a race or ethnic group. Whereas the biased effects of pulse oximeters will have differential effects along a continuous spectrum of phenotypic difference, the biased effects of race correction algorithms are categorical.

Attributing the negative health effects of pulse oximeters to colourism does not discount that racism and colourism are directly connected in this case. Colourism and racism are inextricable from each other in this case because the development of the medical technology we now use was influenced by a history of White supremacist racist development (see Liao and Carbonell 2023). What highlighting colourism in this case does show is that speaking about the disparity (only) in terms of racism or ethnic discrimination masks how the disparity is realised and conceals the internal heterogeneity of the disparity within the racial and ethnic groups of concern.

Much like many other cases of racism in health, this case also shows that colourism does not need animus against any specific individuals or groups to continue to be achieved. The case of pulse oximeters also illustrate how discrimination and the production of its effects can be fixed into technical scientific procedures and medical devices that perpetuate disparities through use even in the absence of animus or ill-will (Liao and Carbonell 2023). The desire of a clinician to use pulse oximeters for positive social purposes, for instance, will not change the biased readings that it will give and the inequitable health disparities that are likely to follow as a result. Nevertheless, there are still cases where the effects of racism remain more direct and intentional. We cannot discount the role of animus and bigotry in health because active discrimination and racist ideologies still play an active role in contemporary society (e.g., see Taylor 2019 on the “Jeff Sessions problem”) such as how a person is treated in the healthcare system (Hamed et al. 2022) or what creates the demand for—and influences the individual’s decision to use—dangerous skin lightening creams in the first place (Davids et al. 2016).

The effects of colourism can be so significant that its health effects between members of the same race on the dimension of colour can be greater than racial inequalities between Blacks and Whites (Monk 2021: 38). This signals an urgent need for the recognition and study of the effects of colourism in health alongside racism and ethnic discrimination. The effects of colourism are another example that shows the importance of recognising the internal heterogeneity of racial and ethnic groups to health outcomes. Moreover, it shows that discrimination on the basis of race and ethnicity cannot be assumed to be the most significant

determinant of health even within the context of racially and ethnically discriminatory societies. What I hope to have shown through argument using these examples is the importance of accounting for the heterogeneity of the groups we work with in how their heterogeneity is of relevance to the design of healthcare interventions. The argument I have made highlights why it is important for us to consider how internal heterogeneity can affect the effective design of demographic or population-level public health policy and what approaches to clinical intervention we can justify.

#### 4. Conclusion: No Blank Scripts for Using Race and Ethnicity in Health

In this paper, I argued for the benefits of using self-identified racial and ethnic categories over assigned group classifications in health. After establishing the benefits of using self-identified categories in health, I moved on to arguing how risk assessments for self-identified racial and ethnic groups are not always the most useful dimensions of group belonging to consider when it comes to assessing the health risks faced by population or demographic subgroups and individuals—especially when it can be shown using other easily incorporated variables (like socio-economic status or aspects of the built environment) that an individual or subgroup is at higher or lower risk than their group averages. I used this argument to stress the importance of designing healthcare interventions at the public health and clinical level that take account of the internal heterogeneity of ethnic and racial groups. This highlighted the importance of looking at other variables when reasoning about subgroup and individual risk. To this end, I also discussed the understudied effects of colourism to well-being and health disparities. I pointed out that colourism within race and ethnic groups can lead to larger disparities within races and ethnicities than between them in order to signal the importance of studying various forms of inequity in disparity research.

Throughout this argument, I have stressed that the differential concentration of environmental exposures and disadvantage in some racial and ethnic groups but not others is—and has predominantly not been—accidental. This differential distribution of risk and advantage between racial and ethnic groups is a consequence of discrimination and its effects. I have argued that to eliminate the health disparities caused by this differential concentration of environmental exposures and (dis)advantages would require undermining the various systemic and structural features that perpetuate continued demographically concentrated advantage and disadvantage.

The consequence of my argument for the use of racial and ethnic group descriptors in health is that they are only appropriate in settings where their use is justified by their relevance to healthcare goals and outcomes. Their limitations mean that we cannot give a blank script for the use of race and ethnicity in health, but rather that healthcare workers require justification for each kind of use that they put racial and ethnic classifications to in health.<sup>8</sup>

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