

Perspective

Re-politicizing the WHO's social determinants of health framework

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Abstract

Although the World Health Organization's (WHO's) framework on social and structural determinants of health and health inequities (SSDHHI) has done much to raise awareness of these determinants, it does not go far enough in considerations of politics and power. The framework has become more de-politicized since its publication, with the definition of social determinants shifting toward downstream and individualized factors. In the meantime, new research fields on legal, commercial and political determinants of health and health inequities have emerged; however, these have not become integrated adequately into broader SSDHHI frameworks. To address these challenges, we argue for a re-politicization and an expansion of the WHO's framework by including the agents who have power over shaping structural determinants and the ways they use power to shape these determinants. We also provide a more detailed conceptualization of structural determinants to facilitate research. We propose a guideline for evaluating studies according to the extent to which they point upstream versus downstream and incorporate agents and considerations of power. We then use this framework to encourage more research on associations among agents, mechanisms of power, and structural determinants; how changes in structural determinants affect power dynamics among agents; and a wider focus on structural determinants beyond laws and policies, such as broad economic and sociopolitical systems. We also urge researchers to consider societal and institutional forces shaping their research with respect to SSDHHI. Research based on this framework can be used to provide evidence for advocacy for structural changes and to build more just systems that respect the fundamental human right to a healthy life.

Keywords: social determinants of health and health inequities, structural determinants of health and health inequities, political determinants of health, power

Contribution to Health Promotion

- The World Health Organization's framework on social determinants of health does not go far enough in acknowledging the importance of agents, political factors and power dynamics in shaping these determinants.
- We propose an expanded framework that includes the agents engaged in political struggle to shape these determinants, the ways in which they use power, and a more detailed definition of structural determinants.
- We provide recommendations for more research connecting agents more directly to the structural determinants of health and health inequities.

INTRODUCTION

Many underlying causes of ill health and health inequities (HHI), as well as their solutions, are political in the broad sense of the term ('who gets what, when, how' from government; [Laswell, 1936](#)). Politics incorporates laws and policies as well as other structural determinants (e.g. institutional practices, governance) and power. Broadly speaking, power means getting someone to do something (either beneficial or harmful) they would not otherwise do ([Dahl, 1957](#)). As

[King, Jr. \(1968\)](#) stated 'power at its best is love implementing the demands of justice, and justice at its best is power correcting everything that stands against love'. Minimizing the political nature of the causes of ill health in favor of individual-centered approaches and downplaying the importance of power dynamics result in ineffective solutions to public health problems, growing health inequities and stigmatization of the less powerful members of society ([Goldberg, 2012](#)). The goal of this article is to re-politicize

the field of social and structural determinants of health and health inequities (SSDHHI).

After reviewing the history of politics in public health, we lay out a framework with three components: structural determinants, the agents influencing them and how they use power to influence the determinants. We end with recommendations for research.

History of politics in public health

The involvement of politics and power relationships in public health was apparent by the 1600s (Nedel and Bastos, 2020). Discussing the conditions of cotton, wool and silk workers in the early 1800s, for instance, Villermé noted that ‘half of the employers’ children reached the age of 21, while half of the workers’ children died before two years of age’ (Nedel and Bastos, 2020, p. 2). Harvey (2021) traces the origin of the field of the political economy of health to Engels, who described the health effects of workers’ exploitation by capitalists and coined the term ‘social murder’. Indeed, in 1883, a journal article noted that “‘sanitary science’...is a segment of political economy’ (Fee and Brown, 2002). There have been conflicts between public health advocates and political and business interests ever since (Fee and Brown, 2002; Fairchild et al., 2010; Goldberg, 2012). The public health field in the USA in the 1800s was concerned with societal solutions to environmental conditions producing poor health. By the 1940s, however, it became divorced from alliances with labor, housing reformers, social welfare organizations and charities; ‘the field was marginalized and left with no political base’ (Fairchild et al., 2010). Although specific agents responsible for poor public health, such as industrialists and the Catholic Church, were identified by 19th-century thinkers like Virchow (Taylor and Rieger, 1985) and Engels (Govender et al., 2023), later frameworks did not explicitly name or consider agents. Rainbow models of health proposed in the 1970s–90s, including Bronfenbrenner’s influential model (1979), acknowledged the importance of socioeconomic, cultural and environmental conditions to health and development (Dyar et al., 2022). These biosocioecological frameworks (with the individual at the center, surrounded by concentric half-circles representing biological, psychosocial and socioeconomic conditions) culminated in an oft-cited rainbow model figure in a report from the World Health Organization’s (WHO’s) European Regional Office in 2005 (see Figure 1 in Dahlgren et al., 2006). However, these models obfuscate the fact that conditions across socioecological levels are not accidental or static. This simplistic representation and lack of focus on power structures creating social conditions have limited attention to broader political factors and processes creating health inequities (Krieger, 2008; McMahon, 2023). For example, it is difficult to use these rainbow models to conceptualize the interplay of public health, politics and power that has led to the pervasive structural racism in the USA and its effects on African Americans’ health (Yearby et al., 2022; Egede et al., 2024).

The report of the WHO Commission on the social determinants of health (SDH) (Solar and Irwin, 2010) called attention to the non-biological bases of HHI. They posited that ‘social, economic, and political mechanisms’ (structural determinants of health inequities) establish and maintain social hierarchies, which shape the distribution of intermediate determinants of health (material and psychosocial circumstances, behavioral and/or biological factors and healthcare systems), which, in

turn, influence HHI. The WHO currently defines SDH as ‘the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life’ (World Health Organization, n.d.b). The 2010 report ended with the recommendation to ‘tackle the inequitable distribution of power, money, and resources’, which falls in the political arena. However, the report has been criticized for not going far enough along this line of thinking (Borde and Hernández, 2019; Muntaner and Benach, 2023). It has been noted that although the report’s text includes considerations of power, the visual framework does not (Blakely, 2008). The report’s restraint is partly due to the political nature of the WHO, which is dependent on members’ consent for its reports (Navarro, 2009). It also receives large donations from private interests (Baru and Mohan, 2018; Birn and Richter, 2018; Banco et al., 2024) and is lobbied by corporate and commercial interests to weaken public health protections (Russ et al., 2022). Researchers have expressed disappointment that the report’s promise has not been fulfilled (Rasathan, 2018; Gopinathan and Buse, 2022; Herrick and Bell, 2022; Schrecker, 2022). The report’s impact may have been reduced because it does not address political, economic and commercial forces shaping structural determinants (Gopinathan and Buse, 2022). Alternative ideas about the social production of health have been proposed by thinkers who take power seriously (Borde and Hernández, 2019), and identify the effects of under-regulated capitalism, the pathologies inherent in ‘normal’ systems and the commodification of minds and bodies on the healthcare system and HHI (Ratner, 2018; Waitzkin & the Working Group on Health Beyond Capitalism, 2018; Benach et al., 2019; Freudenberg, 2021; Harvey, 2021; Das, 2023).

The term ‘political determinants of health’ emerged by the 1990s (e.g. Lena and London, 1993) and has been gaining traction since then (Bambra et al., 2019). Recent review articles (Lynch, 2023) and edited volumes call for greater integration between public health and political science (Fafard et al., 2022). Yet, there are relatively few empirical studies linking political factors to health outcomes, and insights from political science about how laws and policies are made are not incorporated enough into public health research (Mack-enbach, 2014; Falkenbach et al., 2020). The impetus in public health toward individualization and medicalization of health (Lantz, 2019) goes hand in hand with de-politicization and de-emphasizing of inequities (Bambra et al., 2005). These ineffective individual-level solutions are actively propagated by powerful corporations to evade the cost of structural solutions (Chater and Loewenstein, 2023). Nevertheless, a growing body of research (Montez et al., 2023; Rushovich et al., 2024) has documented, for example, effects of economic systems (Coburn, 2004; Sell and Williams, 2020; Barnish et al., 2021; Flynn, 2021), aspects of governance (Wigley and Akkoyunlu-Wigley, 2011; Bollyky et al., 2019; Barnish et al., 2021; Gamm and Kousser, 2021), political economy (McCartney et al., 2019), elections and election laws (Karatekin et al., 2023; Montez et al., 2023; Rushovich et al., 2024), and other laws and policies (Kemp et al., 2022; Montez et al., 2022; Sochas and Reeves, 2023) on HHI. Even the US Surgeon General conceded recently that an economic system that solely values productivity outside the home may run counter to public health and the need for social connectedness (Ink, 2020). Studies have also highlighted consequences of the actions of power players, showing, for example, the

effects of the political party of the US presidents (Rodriguez, 2019), governors (Shvetsova *et al.*, 2022), state legislatures (Rodriguez *et al.*, 2022), commercial interests (World Health Organization, n.d.-a), right-to-work laws (Wallace and Wallace, 2018), and unionization (Muller and Raphael, 2021) on HHI. Furthermore, power imbalances between agents shape global political determinants of health (Ottersen *et al.*, 2014; Kentikelenis and Rochford, 2019).

At the same time, however, the field of SSDHHI has become de-politicized (Raphael *et al.*, 2008; Heller *et al.*, 2024). This is partly due to the long-standing reluctance of public health researchers and practitioners in the USA to appear politically biased (Goldberg, 2012), which may have contributed to the confusion created by the umbrella term for the framework, SDH. Although this term was part of the name of the WHO Commission and their report, their framework places the socioeconomic and political context under *structural determinants of health inequities* and equates *social determinants of health* with *intermediate determinants of health* (e.g. housing, working conditions). However, the whole framework has come to be referred to as SDH, which results in de-emphasizing structural determinants and de-politicizing the framework (Heller *et al.*, 2024). This terminology also conflates determinants of health with determinants of health inequities, which the report's authors caution against. Although both are important, a substantial problem arises when solutions proposed to address health inequities target determinants of health, not determinants of health inequities. In addition, the SDH that do get addressed are almost always proximal/downstream (although that does not have to be the case). Any determinant of health inequities is also ultimately a determinant of health; however, determinants of health inequities are almost always more distal/upstream, which is why the distinction is so critical. Thus, although the WHO report is just as focused on the determinants of health as on health inequities caused by the inequitable distribution of power, the field of SDH resulting from the report is more focused on intermediate determinants of health for all.

Furthermore, like the preceding rainbow models (Dyar *et al.*, 2022), the framework's structural determinants section is underdeveloped. Thus, there is confusion about the meaning of the broad term 'structural' (Rasanathan, 2018) and how to study structures, which stunts 'the sociological imagination' (Mills, 1959). Consequently, even when the importance of structural factors is acknowledged, recommendations can be too vague to inspire effective action (Spencer, 2018; Dopp and Lantz, 2020). For example, a scoping review of adverse childhood experiences (ACEs) research (Karatekin *et al.*, 2022) mapping research questions onto the WHO's SDH framework found no meaningful change in the 20 years after the framework was published. There is growing evidence that programs and policies targeting income inequality, household conditions and family support (e.g. tax credits, paid family leave and early childhood education) are associated with reduced ACEs (Harper *et al.*, 2023). However, most ACEs research continued to examine downstream health effects of ACEs, and researchers continued to mostly recommend better clinical screening and treatment rather than focusing on upstream prevention of ACEs, which would be more impactful and cost-effective in terms of public health and reduction of inequities. Furthermore, the lack of attention to politics and power players in the WHO framework makes structural determinants seem immutable and decontextualized. Conse-

quently, attention is focused more on the effects of structural determinants (usually laws and policies) and on how intermediate determinants shape health and less on the agents influencing those determinants and how they can be changed. This is akin to focusing far more on the consequences of natural disasters caused by climate change and on laws regulating the home insurance industry than on the causal role of the fossil fuel companies.

This de-politicization is apparent not only in research but is now part of the US government's conceptualization of SDH. Although the WHO's definition refers to both the conditions influencing health and the forces shaping the conditions, a number of important federal documents refer only to the conditions (e.g. Healthy People, 2030, USDHHS Office of Disease Prevention and Health Promotion, n.d.). For example, a bill to codify and establish an SDH program at the Centers for Disease Control (CDC) refers only to the conditions, not the forces shaping them (Sen. Smith, 2024). The multisector collaboration approach to addressing HHI favored by US federal agencies also focuses on individual-level risks, not upstream causes (Berkowitz, 2024). Similarly, the Centers for Medicare and Medicaid Services recently mandated that hospitals screen patients for SDH (Neshan *et al.*, 2024). Yet, a review of these determinants (Neshan *et al.*, 2024) shows that they only refer to intermediate determinants, leading to individualized interventions (e.g. referring patients to social workers for help with housing). By definition, this type of screening identifies SDH in individuals, making them a characteristic of the person rather than of society. Although better than not paying any attention to SDH, these screenings and individualized approaches are costly (Brown *et al.*, 2022b); put the burden of addressing SDH on patients and healthcare workers; are ineffective if healthcare workers are not equipped or trained to offer appropriate remedies or if the healthcare system is unwilling to engage politically to address the SDH policy needs and do not alleviate health inequities.

Focusing solely on laws and policies or on intermediate determinants, without drawing attention to the agents influencing these determinants, will not improve population health. A clear demonstration of the inadequacy of focusing on laws and policies alone can be seen in the United Kingdom (UK), where the government commissioned reports in 2010 and 2020 from Sir Michael Marmot, one of the founders of the contemporary field of SDH and the chair of the WHO's SDH Commission in 2008. The report's recommendations focused on evidence-based policies to improve population HHI (e.g. early childhood education, housing) and have been adopted by several cities in the UK (Marmot *et al.*, 2020). However, as acknowledged by Marmot (2020), population HHI has been worsening substantially in the country as a whole during the past decade (Hiam *et al.*, 2024). Marmot attributes these trends to austerity policies, including regressive taxation, and cutting back of social services, and the resulting increase in inequalities (Marmot, 2020). Yet, all of the recommendations of the 2020 report (Marmot *et al.*, 2020) are about policies related to health, and none involve governance or politics.

This de-politicization of the WHO's framework is likely not a natural process but results from political forces actively shaping discourse (Bambra *et al.*, 2005). Large corporations, which shape the conditions in which we live, work and die, control health discourses to their own benefit (Freudenberg, 2021). Whether solutions to a problem are posed as individualistic or collective choices is a function of the differential

power of groups in society (Labonté and Stuckler, 2016; Malbon *et al.*, 2016), and powerful corporations push for individualistic, market-driven solutions. This discourse of de-politicization has to change. Researchers have suggested substituting ‘driver’ or ‘determination’ for ‘determinant’ to imply agency (Nedel and Bastos, 2020; McMahon, 2023; Medvedyuk and Raphael, 2024). However, explicitly naming specific agents in these frameworks would be more effective than subtle changes in terminology.

Goal of the current article

The goal of this article is to inspire research to re-politicize the WHO’s SDH framework by elaborating on, and going further upstream from, the ‘Sociopolitical and Economic Context’ section to include the agents shaping these contexts and the ways they use power to influence SSDHHI. We do not elaborate on the intermediate determinants of health in WHO’s framework. Instead, we expand on recent work by researchers who have sought to operationalize the term ‘structural’ and to include considerations of power in SDH frameworks (Friel *et al.*, 2021; Heller *et al.*, 2024).

THE SSDHHI FRAMEWORK

Figure 1 displays the proposed framework. We present a more detailed version here (<https://prezi.com/p/edit/qlqwbikisiy/>).

Health as a human right

We start with a reminder that health is a fundamental human right and that it is the responsibility of governments to provide the conditions in which this right can be fulfilled.

Agents

Next, we highlight the agents with power over SSDHHI, which in turn shape the conditions in which we live, work and die. ‘Agents’ in this context includes any person or entity with power over SSDHHI, such as voters, government agencies and for-profit corporate lobbyists. Agents include *the government* (including the executive, legislative and judicial branches at different levels of government and the agencies and institutions they control), *political parties*, *moneyed interests* (e.g. businesses, chambers of commerce, professional and trade associations), *the media* (e.g. public and private media companies; citizen-journalists), *knowledge creators* (e.g. scientists, historians), *religious institutions*, *actors on the global stage* (e.g. individual countries, international organizations, transnational corporations) and *the people* (i.e. individuals not officially representing other agents who could act collectively to influence SSDHHI). The power of each of these agents increases with the extent of their organization, resources, historical roots and legitimacy, as well as other factors considered in the next section on power. For example, the people, as individuals, have the power to shape broad sociopolitical and economic systems (e.g. through consumption habits), ideas (e.g. by challenging dominant narratives), governance (e.g. through citizen-led ballot initiatives), elections (e.g. voting, volunteering), institutional practices (e.g. testifying or serving on commissions), laws, policies and their enforcement and interpretation (e.g. through lobbying, protests, petitions, letters to the editor). The fewer the constraints on these behaviors (e.g. due to health, transportation, time, money); the more they are a part of a collective action (e.g. a boycott), movement (e.g. Black Lives Matter) or an organi-

zation (e.g. labor unions, the National Rifle Association); the more they are aligned with stratifiers that confer power (e.g. wealth, race, gender); the more types of power they amass (e.g. economic, moral, network); the more spaces they operate in (e.g. media, different levels of government) and the more they coordinate with other powerful agents (e.g. businesses, elected officials), the more power they will have. In turn, the more power they have or might potentially have, the more they will be confronted by agents whose power they challenge. In examining the origins or effects of SSDHHI, researchers should try to, as much as possible, specify the entities that have shaped those SSDHHI. This would shift the dominant narrative away from the idea that the status quo is natural or has arisen without manipulation by the powerful.

Power

As noted by Kickbush (2015), ‘politics is a continuous struggle for power among competing interests’. Thus, the framework includes different ways agents can use their power. As stated by Dahl (1957), a single, coherent, exhaustive definition of power that can apply to all studies is difficult; ‘we are much more likely to produce a variety of theories of limited scope, each of which employs some definition of power that is useful in the context of the particular piece of research or theory but different in important respects from the definitions of other studies’ (p. 202). Different typologies of power have been proposed for different purposes and contexts and summarized in excellent reviews (Moon, 2019; Harris *et al.*, 2020; Popay *et al.*, 2021). For any specific issue, understanding the role of power generally involves identifying the *power players* and the *purposes for which power is used* by different agents in that context. Other dimensions of power include *types of power* (e.g. economic, legal, moral), the *levels at which power is used* (e.g. institutional, national), *forms of power* (visible, invisible, hidden), *spaces at which power is used* (e.g. behind closed doors, claimed spaces) and *factors that facilitate or hinder the use of power* by different agents (e.g. health). It would also be informative to analyze situations in which powerful agents chose not to use their power and situations in which uses of power could make a difference. The goal of this analysis would not be to describe every aspect of power relevant to a situation but to understand how different agents have shaped, and can shape, structural determinants. Friel and colleagues (2021) have provided an outstanding example of qualitative research identifying the role and expression of power in the development of seven policies relevant to public health in Australia. Elucidating mechanisms by which agents can shape SSDHHI in studies like this is crucial for tackling the inequitable distribution of power to advance health equity.

Structural determinants

Next, we include structural determinants of HHI. We refer the reader to Heller and colleagues (2024) for a detailed discussion of what ‘social structures’ means and expand on their definition in the current framework.

We first clarify our terminology. Solar and Irwin (2010) define structural and social determinants as (1) the broad socioeconomic and political context, (2) structural mechanisms that ‘generate stratification and social class divisions’, (3) ‘the resulting socioeconomic position of individuals’ (pp. 5–6). Heller and colleagues (2024) define structural determinants as ‘1) the written and unwritten rules that create, maintain, or eliminate durable and hierarchical patterns of

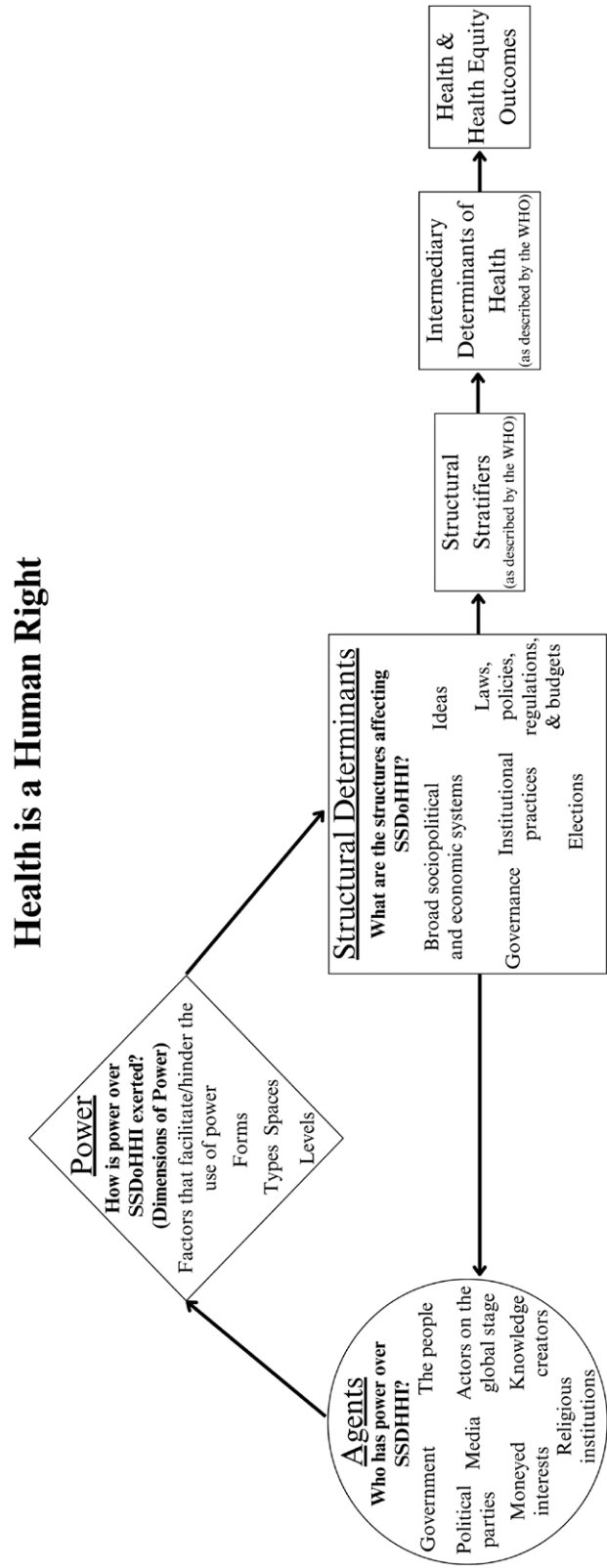


Fig. 1: The proposed framework for SSDHHI.

advantage among socially constructed groups in the conditions that affect health, and 2) the manifestation of power relations...'. Their proposed structural determinants include: '(1) values, beliefs, worldviews, culture, and norms, (2) governance (which includes the broad context of Solar and Irwin), (3) laws, policies, regulations, and budgets, and (4) institutional practices'.

What are the differences between system, context and structural determinants? 'System' emphasizes ordered relationships among components. Systems can exist at different levels, from the family unit to global capitalism. For example, we can refer to a democratic system in which structural determinants (e.g. laws, institutional practices) interact with each other; however, we can also refer to the justice system, with its own interacting components, as a structural determinant in a democratic system. Context is similar to system, but more vague and does not focus on ordered relationships. Structural determinants are conceived of as mechanisms or rules affecting inequities and operating within systems.

To encourage terms more amenable to research, we place sociopolitical and economic 'systems' (rather than the broad 'context') above other structural determinants (but still within that category), separate these broad systems from governance (which we define more narrowly than Heller *et al.* (2024)), separate power from structural determinants, and separate structural stratifiers from the rest of structural determinants. In addition, both Solar and Irwin (2010) and Heller and colleagues (2024) focus primarily on structural determinants of health inequities, although their frameworks are labeled as 'social determinants of health'. However, overall health also matters—an inequity in the context of overall good health may result in better health for all than an ideal level of equity in the context of overall poor health. Thus, we refer to SSDHHI in our framework to emphasize the importance of both.

Figure 1 starts with the *overarching political and economic systems* (e.g. democracy, authoritarianism, oligarchy, capitalism, neoliberalism) and the *global geopolitical system* (e.g. international blocs and alliances). If agents are the players, this level represents which game is played and which rules prevail. Those in power directly influence which system is dominant and also have more influence within the system. Next, *ideas* are perhaps the most important but also the most elusive of structural determinants, as they shape thinking about HHI (MN Department of Health, 2024). The rules of the game and how it is played (i.e. the way the sociopolitical systems are implemented in governance and institutional practices) follow. These rules include *laws, policies, regulations and budgets* as another set of structural determinants. *Implementation, interpretation, enforcement and monitoring and evaluation* of these laws, policies, regulations and budgets also fall under structural determinants. The way *elections* are set up and conducted is a joint function of governance (e.g. constitutional constraints on who is eligible for office), institutional practices (e.g. institutional cultures created by secretaries of state in the USA and how they choose to implement laws) and election laws and policies. All these structural determinants are the products of the actions of agents (past and present) and their power dynamics.

Comparison to other SDH frameworks

Despite some overlap, several features distinguish this from other SDH frameworks. Excellent detailed conceptualizations

of political (Kickbusch, 2015; Dawes *et al.*, 2022), legal (Gostin *et al.*, 2019), economic (Flynn, 2021), political-economic (Kentikelenis and Rochford, 2019), commercial and corporate determinants of health (Mialon, 2020; Freudenberg *et al.*, 2021; Gilmore *et al.*, 2023) exist, but these do not always make it into broader SDH frameworks. For example, Maani and colleagues (2020) note that only one of the 48 SDH frameworks they reviewed explicitly included commercial actors, although others mentioned them in the text. The current framework aims to touch upon all these inter-related domains that should be considered as a whole. Taking Heller and colleagues' (2024) article as the starting point, we also provide a more detailed and tractable definition of structural determinants than some other frameworks. Most importantly, we explicitly draw attention to the agents influencing SSDHHI instead of depicting the outcomes of agents' actions in isolation (e.g. with boxes labeled 'laws and policies' that are not tied to upstream influences). Unlike many other frameworks, we include other countries and international alliances and organizations as agents, given their importance in shaping global health (Ottersen *et al.*, 2014). In addition, we highlight considerations of power as the mechanism by which agents influence structural determinants, similar to some of the frameworks on commercial and political determinants (McKee and Stuckler, 2018).

Recommendations for SSDHHI research

Research on SSDHHI can contribute to a society that is healthier and more just in terms of health outcomes by helping shift the balance of power among agents influencing HHI. Thus, we recommend more research focused on the agents, starting with clearly specifying the agents shaping specific SSDHHI. Which agents use which kinds of power and how to influence which structural determinants? How do these change the balance of power and affect health and health inequities? For which purposes do the powerful use their power or fail to use it? How do the traditionally powerless increase their power and for which purposes?

We also recommend broadening the focus of the field as a whole from laws and policies to other structural determinants in Figure 1 and their interactions. These structural determinants should be connected more explicitly to agents influencing them (as Navarro, 2009 stated, 'It is not *inequalities* that kill, but *those who benefit from the inequalities* that kill', p. 15). How do changes in structural determinants change the balance of power among the agents? Who is harmed and who benefits? When the focus is on structural determinants, randomized health policy trials remain an under-utilized method, and we agree with recommendations to expand their use (Engelbert Bain *et al.*, 2022).

Broadening research focus to structures beyond laws and policies necessitates more emphasis on economic systems shaping health. Specifically, more research is needed on how different forms of capitalism shape other structural determinants in ways that potentially threaten population and planetary health and on how to achieve viable and robust reforms or alternatives to the current capitalist systems (e.g. Freudenberg, 2021; Harvey, 2021).

In Table 1, we propose a guideline for evaluating studies according to the extent to which they point upstream versus downstream and incorporate agents and considerations of power. Both upstream and downstream studies are valuable; however, a grossly disproportionate focus in a field on

Table 1: Guidelines for evaluating/conducting research on SSDHHI

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- Who funded the research? What are the priorities of this funding source? Might there be overt or covert conflicts of interest?
 - What kind of narrative is the study promoting (e.g. health as the result of individual choice/behavior vs. collective action)?
 - Is the research focused on determinants of health or determinants of health inequities? If it is about health inequities, is the study simply documenting group differences without pointing to relatively specific agents or causes (which may normalize the inequities; [Nedel and Bastos, 2020](#))?
 - Are the study aims focused on individual change and other changes in intermediate determinants of health, structural change or changes in the balance of power among agents?
 - Does the study focus only on who is harmed or does it provide a more systemic view of both who is harmed *and* who benefits from the harm?
 - How clearly are the agents shaping the structural determinants spelled out (e.g. referring to laws and policies in general vs. referring to a specific decision by the US Supreme Court at a specific time)?
 - Does the study have a deficit- or strengths-based focus? Is it contributing to stigmatization or to empowerment of populations whose health is disproportionately worse?
 - Are there any recommended changes or interventions? If so,
 - Are the recommended changes pointing to shifting the balance of power among agents, to structural determinants or intermediate determinants? Whom would the recommended changes benefit/empower and whom would they harm/disempower (in terms of both health and wealth)? Would the recommended changes help preserve or disrupt the status quo?
 - Is it clear whose responsibility it is to make the recommended changes?
 - Who is responsible for the recommended changes? Individuals? Community-level organizations? Healthcare workers or organizations? Businesses? Government? If it falls under the government's responsibility, which specific part of the government would be responsible?
 - What level of prevention are the recommended changes aimed at (primordial, primary, secondary or tertiary)?
 - At what level of the Health Impact Pyramid ([Frieden, 2010](#)) are the recommended changes? How much impact would the recommended intervention have relative to the scale of the problem?
 - Are the researchers advocating for interventions that might exacerbate inequities (e.g. by requiring individual effort, access to resources) or reduce them (e.g. by instituting universal interventions that are not dependent on individual behaviors) ([Phelan et al., 2010](#))? Are determinants of health being provided as the only solutions to the problem of health inequities ([Solar and Irwin, 2010](#))? Are the recommendations aimed at helping only a targeted group harmed by inequities cope with poor health? Or do they advocate for tackling the causes of health inequities at the societal level?
 - How might the outcomes of recommended changes be collected and evaluated? Could any specific agency or organization be held accountable for obtaining and evaluating the results?
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downstream effects helps preserve the status quo instead of addressing the fundamental conditions leading to poor HHI ([Karatekin et al., 2022](#)). Focusing on downstream factors also means that nobody is held accountable for the conditions leading to poor HHI. The questions in this table can serve as self-reflective questions as researchers start new projects. Including these questions in the pre-registration of studies would further ensure that these goals are intentional and the implications of potential results are thought through. These questions can also be used by funding sources aiming to shift research toward upstream, and therefore more impactful, causes of morbidity and mortality.

The following approaches are necessary for re-politicizing SSDHHI research and integrating upstream causes with downstream effects within a broader framework.

1. Collaboration and integration across disciplines are necessary for connecting agents and structural determinants to individual outcomes and for systems analyses. Interdisciplinary approaches, which blur boundaries between disciplines, can expand thinking within disciplines; transdisciplinary approaches, which transcend disciplines, can help analyze dynamic systems ([Choi and Pak, 2006](#)). Collaborations among disciplines such as political science, economics, political economy, political philosophy, public health, epidemiology, policy studies, public administration, sociology and medical sociology, medical anthropology, history, psychology, law and social movement theory can all strengthen this work and the solutions proposed and implemented. [Montez and colleagues \(2022\)](#) provide an excellent demonstration

of how interdisciplinary collaboration can lead to an insightful analysis of the association between US state policy contexts and mortality.

2. Including people with relevant lived experiences as advisors, co-research designers and co-authors (i.e. community-based participatory research, CBPR) would increase the studies' impact ([Leung et al., 2004](#)). Researchers can share their power, voice and influence in this way with those who have been historically oppressed, marginalized and left out of research. The inclusion of stakeholders outside academia who understand first-hand how power works can illuminate uses of power that are not visible or quantifiable. Thus, CBPR can highlight unique and complex ways in which agents exert power that researchers may overlook, enabling communities to increase their power ([Appadurai, 2006](#); [Wallerstein et al., 2020](#)). CBPR approaches are fundamentally similar to anti-racist approaches, as they center the needs and voices of marginalized groups and tackle societal issues such as structural racism ([Fleming et al., 2023](#)). Therefore, CBPR has important implications for research questions and methodology and how findings are used to affect upstream change and reduce health inequities. CBPR can be advanced through journal editorial boards (e.g. *Journal of Health Care for the Poor and Underserved*), and private (e.g. some programs of the Robert Wood Johnson Foundation) and government funders (e.g. [NHS Health Research Authority, n.d.](#) in the UK). Importantly, CBPR can lead to, or be part of, a movement toward building alliances with others working toward the same goals, such as climate activists ([Freudenberg et al., 2021](#); [Lacy-Nichols et al., 2022](#)), and

- toward empowering these groups (Bhargava and Luce, 2023).
3. Comparative analyses across jurisdictions, venues, topics and countries can place issues in a larger context. As the main agents, uses of power and motivations for its use, and structures are similar across contexts, comparative analyses can provide insight and strengthen conclusions. A case study by Bambra and colleagues (2019) provides a good example of how a political economy approach can be used to compare and contrast health status across regions. Furthermore, some of the same power players (e.g. multinational corporations) operate across multiple settings. Intermediate determinants of health (e.g. housing scarcity, food insecurity, poor working conditions) stem from similar, sometimes identical, causes (e.g. business lobbies). Importantly, focusing only on locations where exposure is uniform may cause researchers to miss the true distribution of the causes of poor health (Rose, 2001). For example, it would be impossible to understand the true impact of the US healthcare system without comparing it to countries with universal healthcare. Thus, investigations examining parallels across contexts and comparing political solutions to the same public health problems across settings would be helpful.
 4. A long-term perspective is important to integrate upstream and downstream factors. Historical analyses (Farmer, 2004; Gill, 2021) can elucidate how different agents have used power to influence structural determinants for which purposes and how these structural determinants could be changed now, for better and for worse (Nedel and Bastos, 2020). For example, systematic housing discrimination through redlining goes back to the early 1900s in the USA (*Mapping Prejudice*, n.d.), and still contributes to disparities in the geography of firearm violence in the USA. These disparities are felt most profoundly in predominantly Black communities (Mehranbod et al., 2022). Thus, understanding the history of structural racism in the USA can illuminate current disparities in firearm violence exposure. Another good example of applying a historical framework to SSDHHI is a qualitative study pointing out parallels between Engels' critique of the political economy of England in 1845 and the political economy of Canada in 2023 (Govender et al., 2023). This comparison lays bare the structural role of capitalism in worsening population health across time and place. Historical analyses can also clarify how agents and structures can vary depending on the historical context and why, for example, a certain law in one setting may play out differently than the same law in another setting. The large variability in the implementation of the Affordable Care Act across US states is a case in point. Furthermore, long-term longitudinal studies are necessary to fully evaluate the health effects of structural determinants (Aizer et al., 2016; Rushovich et al., 2024), interventions aimed at building power, and to trace adaptation and feedback processes over time in complex dynamic systems.
 5. Because the ideas that infuse public health messages and interventions are arguably the most influential structural determinants, we placed them above other determinants in Figure 1. Analyses of the discourse, narratives and hegemonic mechanisms used to define and describe public health problems and research questions are necessary to bring out assumptions and biases underpinning action or lack of action in public health. Although it is hard to connect these to specific health outcomes, there are excellent examples of qualitative analyses of these structural determinants in research, textbooks and public documents. This research increases awareness of the underlying messages in public health, their origins and their implications for power dynamics (Krieger, 2008; Raphael, 2011; Brisbois and Plamondon, 2018; Amri et al., 2021; Savona et al., 2021; Karatekin et al., 2022; Tung et al., 2022; Azadian et al., 2023; Chater & Loewenstein, 2023; Westbrook and Harvey, 2023). These messages can, in turn, become internalized and shape the views and actions of public health officials regarding SSDHHI and whether they treat health in a de-politicized manner (Brassolotto et al., 2014).
 6. Methodological pluralism is essential to tackle the complex relationships in the framework. Methods for complex systems analyses (Rutter et al., 2017; Jeffries et al., 2019; Hébert-Dufresne et al., 2024), identifying causes of disparities (Jeffries et al., 2019), and establishing causality (e.g. difference-in-difference analyses, Wehby et al., 2020); agent-based model simulations (Orr et al., 2016); and lengthening causal chains from upstream factors to downstream effects are crucial for connecting the actions of agents to their effects on public health. Complex system analyses often require enormous amounts of data, so an important aspect of moving toward an understanding of complex systems is good data collection across all components of those systems. These analyses can facilitate research focused on systemic changes and alterations of power dynamics rather than changes to specific laws or policies within the existing system. Hypothetical scenario testing using System Dynamics Models (SDMs) can simulate the immediate effects of changes made to any number of dynamically interacting factors with well-established or agreed-upon associations (Hasselman, 2023). SDMs could, for example, compute how much better health would be today among a historically traumatized or oppressed group if such trauma had never occurred; positive results from such SDM scenario testing could thus be used to shift attitudes toward empowerment for that group. Randomized community trials can be used to organize different communities to advocate for different structural changes affecting HHI (Forster et al., 1998) and to examine the long-term effects of such community organizing.
- Conducting case studies and root cause analyses (Montez et al., 2021); doing qualitative research to understand the complex web of agents and uses of power (Smith, 2010; Friel et al., 2021); examining a broad range of outcomes of laws and policies over time (Reinhart, 2024); and taking advantage of naturalistic experiments (De Vocht et al., 2021) can also be used to investigate structural determinants. A good example of a naturalistic experiment examining a broad range of outcomes is a study of the effects of the 2002 'beltway sniper' attacks on birth outcomes (Currie et al., 2023). In-utero exposure to this 3-week-long indiscriminate killing spree increased the likelihood of low birth weight and premature births in affected areas in Washington, DC, and Virginia by 25%, demonstrating the overlooked but long-lasting effects of mass shootings that go far beyond the more obvious victims.
- However, methodological fixes and interdisciplinary collaboration are not enough if researchers continue to view

problems from the same conceptual lens within the same institutional constraints currently in place. Although we as researchers would like to think of ourselves as agents shaping structural determinants, we are also subject to other agents' influences and the same structural determinants in [Figure 1](#) just as much as the targets of our investigations are. We are part of the system; pushing back against the system requires understanding it and deliberately operating differently. Thus, self-examination by researchers, combined with a deeper understanding of the broader narratives that we are influenced by, is necessary to consider the factors that shape our thinking and research, how these factors influence our questions and results, and how these conditions can be changed. [Chater and Loewenstein \(2023\)](#) provide a superb example of researchers explicitly examining the corporate forces behind their chosen research foci on individual-level solutions. As their article demonstrates, researchers are shaped by the same ideological context as everyone else outside of academia ([Scott-Samuel and Smith, 2015](#)), which, in turn, shapes what is problematized ([Bacchi, 2016](#)). For example, a significant portion of public health departments in universities are named for, and funded by, private donors; this arrangement leads to public health priorities and narratives that do not challenge these donors' interests ([Fliss et al., 2021](#); [Medvedyuk and Raphael, 2024](#)). Although public health textbooks praise ecological theories framing behavior as the result of multiple interacting environmental forces, they nevertheless place greater emphasis on individual behaviors than on societal factors ([Westbrook and Harvey, 2023](#)). Transformative ideas about policies are not encouraged in policy and funding contexts, leading to collection of 'policy-informed evidence' rather than evidence-informed policies ([Smith, 2010](#)). The structural biases of racism, sexism, ethnocentrism, classism and ableism shape how researchers think about health, their research questions and methods. Furthermore, a large portion of tenure-track faculty across many fields are graduates of a small number of universities in the USA ([Wapman et al., 2022](#)), resulting in a large portion of research being based on the concerns and priorities of a small number of research institutions. Recent requirements to pay thousands of dollars to publish open-access papers in peer-reviewed journals make it harder to disseminate research, especially for researchers without grant funding, and further concentrate the power of a small group of researchers who can obtain funding.

There is increasingly greater interference in university affairs by politicians and wealthy donors (e.g. [Blinder, 2024](#)), and federal funding is vulnerable to political influences. For example, federal funding for firearm violence research was banned by the US Congress until recently ([Ault, 2021](#)). Researchers in some fields tend to avoid research perceived as 'too political' for fear of isolation, retaliation or inability to obtain funding or to publish.

The availability of data on upstream factors is limited even when researchers want to go upstream. For example, the NIH PhenX toolkit (<https://www.phenxtoolkit.org/>) comprises protocols to reliably measure biological, social and psychological variables, and as of 2024, includes 14 structural social determinants of health (e.g. minimum wage) and 23 social determinants of health (e.g. internet access)—a relative paucity compared to its combined 941 biological and psychological protocols. Notably, PhenX does not yet include (or mention) many structural factors that are reliably measurable (e.g. abortion access, gun laws, voter turnout percentage),

which potentially discourages NIH-funded researchers from studying an array of oft-politicized upstream factors.

Most importantly, researchers need funding for research and tenure. However, few funding agencies are willing to fund investigations of upstream factors. For example, a study examining grants awarded by the National Heart, Lung, and Blood Institute between 2008 and 2020 showed that only 4.3% of the grants were focused on SDH ([Brown et al., 2022a](#)). Furthermore, these grants were primarily on the effects of intermediate determinants of health, not on the forces shaping them. In addition, as federal funding for research decreases, researchers have come to depend more on private foundations and 'philanthrocapitalism', which promote service delivery and technological solutions ([McCoy et al., 2009](#)) and are not likely to fund investigations of societal, regulatory solutions to public health problems ([Lierse et al., 2022](#); [Medvedyuk and Raphael, 2024](#)). Yet, to achieve tenure, researchers have to obtain grant funding and publish, which means that research on political factors is disincentivized. Researchers who wish to study 'the wider set of forces and systems shaping the conditions of daily life' have to navigate these substantial challenges. In [Table 2](#), we present some potential solutions to these problems.

WILL THIS SSDHHI FRAMEWORK BE ENOUGH TO IMPROVE HHI?

The aim of this framework is to shift dominant narratives in research relevant to public health. This framework may plant a seed in some minds and can contribute to a larger movement if combined with similar work questioning current sociopolitical, geopolitical and economic systems (e.g. see [Tables 3 and 4](#) in [Raphael and Bryant, 2023](#) for works critiquing capitalism and proposing alternatives). These combined efforts can ultimately change dominant narratives in academia, which can permeate other structural determinants.

The framework itself will not reverse the trajectories of worsening HHI. As noted under recommendations, researchers are part of a system that is not conducive to high-impact research challenging the status quo. There are other agents influencing SSDHHI. HHI will improve only when agents working to improve HHI can shift the balance of power away from those benefiting from worsening HHI. This could well mean advocating for post-capitalist democratic socialist societies ([Harvey, 2021](#); [Speed and McLaren, 2022](#); [Raphael and Bryant, 2023](#); [Berkowitz, 2024](#)). Researchers, can and should, play a role in shifting the balance of power toward improved HHI.

CONCLUSIONS

The WHO has provided a valuable service by drawing global attention to non-biological causes of HHI. However, too much of the research in this field is on intermediate determinants of health and too little on structural determinants of HHI and the political forces shaping them. This development is similar to what happened with ACEs research in the last two decades ([Karatekin et al., 2022](#)). There was an initially promising period of research demonstrating associations between ACEs and a myriad of lifelong health consequences. This presented an opportunity to use these findings to advocate for structural changes to prevent conditions giving rise to ACEs. Instead, research became overwhelmingly focused on the downstream

Table 2: Potential solutions for creating an academic environment more conducive to studying SSDHHI

Level of the solution	Potential solutions
Ideas	Pay more attention to agents and structural determinants in national discourses that shape everyone's minds, including researchers'
Government	- Make sure education systems are not driven by market considerations. - Increase higher education and research funding so universities and researchers do not have to rely on philanthropic capitalists to fund their operations and research. - Have national institutes for research push for more research on upstream causes of societal problems (e.g. by earmarking a certain proportion of funds for this purpose), facilitate data collection on upstream factors and normalize political concepts in research relevant to public health. - Have non-partisan groups oversee research funding decisions. - Create opportunities for long-term and sustainable funding streams that will not be at risk as a result of short-term political changes. - Change research funding mechanisms to encourage research based on the ideas outlined under recommendations and to boost transformative ideas. - Provide funding to collect high-quality data specifically for upstream research; encourage data-sharing agreements and open data. - Create legal safeguards against political interference in universities' intellectual activities.
Education systems from pre-K to higher education	- Strengthen education systems at all levels so that a more diverse set of individuals can rise to the top to do high-quality research. - Ensure that textbooks and courses emphasize upstream solutions to societal problems and do not shy away from discussing the influence of politics on HHI.
Universities	- Increase power of faculty over administration (e.g. through unionization). - Restrict the influence of rich private donors and corporations and resist political interference in the intellectual activities of the university. - Limit corporate ownership and funding of academic health centers, including schools of public health, medicine, nursing and dentistry (e.g. by pharmaceutical and medical device companies, non-academic hospital systems and payers/insurers). - Diversify tenure-track faculty (Syed <i>et al.</i>, 2018) (e.g. through cluster hires, Sgoutas-Emch <i>et al.</i>, 2016) and graduate students who are <i>also</i> committed to upstream solutions. - Provide more internal sources of funding for research focusing on upstream factors. - Facilitate external funding for research focusing on upstream factors; build more partnerships with sources that fund upstream research. - Make sure tenure criteria accommodate researchers focusing on upstream research; elevate the importance of internal funding in tenure and merit decisions; provide more rewards and incentives for upstream research focused on public health priorities.
Research community	- Take steps to lessen the concentration of power in a handful of universities and increase intellectual diversity; increase representation of researchers from a wider range of educational institutions. - Develop guidelines and policies to protect researchers who may fear the consequences of becoming 'too political'. - Facilitate citizen science, which is now used in fields such as animal science and astronomy and which could be harnessed to study upstream factors. - Make sure journal editors and professional organizations prioritize and encourage research that points to upstream solutions and normalize political discourse. - Ban publishing fees while still maintaining open access (Langham-Putrow, 2023; OSTP Issues Guidance to Make Federally Funded Research Freely Available Without Delay OSTP, 2022; Towards Open Access University of Minnesota Libraries, n.d.).
Individual researchers	Step back and interrogate own work to consider which dominant narratives our research is pushing, what we are problematizing and whose interests we are advancing.

effects of ACEs and on building resilience, privatizing this population-level risk factor (Suslovic and Lett, 2024). Efforts to incorporate SDH into patients' treatment plans (Neshan *et al.*, 2024), although well-intentioned, may end up with privatizing risk the same way that ACEs screeners do. A recent large scoping review of neighborhood research mapping research questions to the WHO's framework (Gresham & Karatekin, in preparation), based on a different set of studies, demonstrates that this area is also overwhelmingly focused on downstream effects. Consequently, researchers' recommendations often include individual-level interventions to relocate people to better neighborhoods rather than structural changes to improve the neighborhoods themselves. Risk has also been individualized with respect to the COVID-19 pandemic, from an initial government response focusing on collective responsibility to prevent infections to the current

approach placing all responsibility for preventing and coping with the long-term effects of infections (Al-Aly *et al.*, 2024; Cai *et al.*, 2024; Ewing *et al.*, 2024; National Academies of Sciences, Engineering, and Medicine, 2024) on individuals (Holdren, 2022; Tomori *et al.*, 2022). This trend away from putting the onus for prevention of illness on governments toward placing the burden of prevention and treatment on individuals across multiple fields reflects the power conflict between those who argue that public health problems require political solutions (Goldberg, 2012) and those who would rather shift the responsibility to individuals. It is important to avert SDH research from going further down this route.

The framework we propose operationalizes the definition of 'structural' and draws attention to the agents engaged in political struggle to shape structural determinants of HHI. Research based on this framework can be used to provide

evidence for the effects of broad economic and sociopolitical systems on health, advocacy for structural changes and for legal arguments (Arkush and Braman, 2023) to hold agents accountable for the harms they cause; to buttress the 'public health playbook' against commercial determinants of health (Lacy-Nichols *et al.*, 2022); to push back against false ideas and harmful dominant narratives; to 'narrat[e] a different possibility' (Friel *et al.*, 2022) and to build more just systems that respect the fundamental human right to a healthy life.

AUTHOR CONTRIBUTIONS

All authors contributed to the conceptualization and review and editing of the study. C.K. wrote the first draft of the manuscript and prepared the figure in Prezi. B.G. prepared Figure 1.

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