Barbara Starfield’s paper on *Pathways of Influence on Equity in Health* (Starfield, 2007) is a timely call to scholars to consider the intricate webs of societal-level causal factors that can act independently and in concert to produce health inequality. The paper makes a persuasive case for avoiding simplistic, one-dimensional explanations for phenomena that are likely to be complex. The author presents a diagram reflecting the complexity of the conceptual framework, depicting multiple factors interacting with each other and across different levels of influence leading to inequality in health. I will comment here on just two of the many issues raised by this thought-provoking paper.

Firstly, Starfield’s figure 1 is useful in calling attention to several different kinds of societal influences and to factors interacting within and across levels of influence. Another diagram depicting multiple levels of influence leading to social inequality in health was developed by Diderichsen and Hallqvist. The Diderichsen diagram depicts a cycle beginning with differences in social position, also referred to as social stratification—which I will define here as the categorization of people into different relative places in social hierarchies determined by economic resources, power/influence, prestige, and social inclusion. Examples of categorization by social position would include grouping people according to their income, accumulated wealth, educational attainment, occupational ranking, or caste in several categories ranked from lowest to highest; or, for example, grouping people in racial/ethnic or tribal groups reflecting prevailing social constructs, and comparing the more disenfranchised or otherwise more disadvantaged groups with the dominant or most powerful racial/ethnic/tribal group, e.g., in the United States and in South Africa, people of European background. The Diderichsen diagram shows that differences in social position lead not only to differential exposures to health-promoting or health-damaging factors but also to differential vulnerability to the health effects of such exposures; differential exposure and differential vulnerability in turn lead to differential risk of disease or injury, which in turn leads to unequal social consequences of disease or injury, which then lead to further social stratification, perpetuating a vicious cycle. For each step in the overall pathway—e.g., between social position and exposure, between social position and vulnerability, and between exposure and disease or injury—arrows indicate effect modification by other factors and they show where policies might intervene to interrupt pathways. It calls attention to the dynamics of cumulative disadvantage across the life course and the inter-generational transmission of disadvantage. I have found Diderichsen’s depiction very helpful in thinking about policy-oriented strategies to achieve...
greater equity in health. Starfield's figure 2, with its
detail on different kinds of policy-level influences,
and its attention to interactions, also is a welcome
complement to the Diderichsen framework.

Secondly, Starfield underscores the importance
of moving from simply describing and measuring the
magnitude of health inequalities to understanding
complex causal pathways. There is also an urgent
need for another, very different, kind of study: well-
designed studies of interventions informed by the
best available knowledge of patterns of distribution,
pathways of influence, and previous experience with
attempting to intervene. In many ways, we know so
little about how to achieve greater equity in health.
However, despite the limitations of our knowledge,
even now we have extensive knowledge of many key
pathways—or at least of important components of
pathways—resulting in health inequality, which has
not been adequately applied to shape policies to
achieve equity goals. We have knowledge from
decades or centuries of observations suggesting
myriad pathways leading from a dizzying array of
manifestations of social advantage/disadvantage to
an equally varied array of health indicators (Dor-
ling, Mitchell, Shaw, Orford, & Smith, 2000;
Lawlor, Ronalds, Macintyre, Clark, & Leon, 2006;
Macintyre, 1986; Mackenbach, Kunst, Cavelaars,
Groenhof, & Geurts, 1997; Marmot et al., 1991;
Patel, Araya, de Lima, Ludermir, & Todd, 1999;
Subramanian, Belli, & Kawachi, 2002; WHO,
1995; Wilkinson & Pickett, 2006; Williams, 1999).
In many cases the rate-limiting step with respect
to achieving more equitable policy change is not
knowledge but political will. In many others,
the rate-limiting step is not so much lack of
knowledge of pathways (although such knowledge
may indeed be incomplete) but lack of solid
evidence of what, in specific and concrete terms,
works best in different settings to close health equity
gaps. That kind of knowledge can only come from
well-designed intervention studies; knowledge of
pathways can point us in promising or at least
plausible directions, but generally cannot tell us
what will be effective and efficient under different
conditions.

For example, we currently have enough knowl-
dge of pathways to say with a high degree of
certainty that poverty increases risks of numerous
manifestations of ill health through multiple path-
ways and mechanisms (Davey-Smith, Hart, Blane,
& Hole, 1998; Duncan, Yeung, Brooks-Gunn, &
Smith, 1998; Lynch et al., 2004; Lynch, Kaplan, &
Salonen, 1997; Marmot & Wilkinson, 2001; Yen &
Syme, 1999). Relevant physiologic mechanisms have
been described, making the knowledge of pathways
biologically plausible (McEwen, 1998; Singer &
Ryff, 1997; Steptoe & Marmot, 2002; Taylor,
Lehman, Kiefe, & Seeman, 2006; Taylor, Repetti,
& Seeman, 1997). We know the most about path-
ways involving absolute deprivation of material
needs (Morris, Donkin, Wonderling, Wilkinson,
& Dowler, 2000; Subramanian & Kawachi, 2006;
WHO, 1995). We also know that under certain
circumstances—e.g., where public policies ensure
adequate shelter, food, water, sanitation, education,
and medical care—low income in itself may not
necessarily lead to health damage (Anand &
Ravallion, 1993). In addition, we have accumulating
knowledge—also biologically plausible—about
health damages that appear mediated by psycholo-
gical stress (operating, for example, through neu-
roendocrine and/or immune mechanisms),
(McEwen, 1998; Singer & Ryff, 1997; Taylor et
al., 2006) including stress associated with having less
control over one’s work/life (Bosma, Schrijvers,
& Mackenbach, 1999; Chandola, Brunner, & Marmot,
2006; Seeman & Lewis, 1995) and fewer resources to
cope (Lynch et al., 1997) and potentially with self-esteem (Marmot, 2003). Knowledge of
psychophysiologic pathways has greatly contributed
to our understanding of how poverty and discrimi-
nation can damage health; and additional knowl-
dge of the complexities of causation may help us be
more efficient in interrupting the relevant psychophysiologic pathways. Furthermore, additional
knowledge of the physiology of poverty and
discrimination may be important in convincing
doubters who are not sufficiently moved by
humanitarian arguments. We need to continue to
pursue that knowledge, and to refine our under-
standing of the complex causation of social inequal-
ities in health.

However, I do not think that we need to wait for
the results of more pathway studies in order to
argue that poverty and discrimination damage
health, that policies should reduce poverty and
discrimination, and to recommend knowledge-
based options that should be rigorously tested.
Starfield makes eminently clear how complex the
relevant pathways are likely to be. An infinite
number of pathway studies could demonstrate
infinite variations on the theme of how associations
between different variables are conditional upon the
actions of other variables whose effects depend on
still other factors, fueling many academic careers but contributing little to guide policy.

We need more studies testing the effectiveness and efficiency of different practical approaches that current knowledge supports as plausible and likely to be the most promising. The relevant knowledge should come from diverse sources and in diverse forms, where possible including but not limited to knowledge derived from results of randomized controlled trials. We need studies with large-scale multiple-component interventions affecting many people in diverse groups and diverse settings. These are expensive. Only public policies can lead to the sort of bold, large-scale experiments required to test hypotheses about policies and programs. Scaling up small-scale interventions that have proved to be promising at the local level is appealing; however, in some cases, there may be no local-level version of an intervention. Thus, because the resource requirements are large, the ability to test hypotheses about the best practical solutions requires overcoming political obstacles. We therefore need better understanding of a particular type of pathway reflected in Starfield’s diagram—pathways of political influence.

We need to advocate strategically for policies to conduct bold experiments testing the most plausible and promising hypotheses on a sufficiently large scale. Colleagues in some countries that have been relatively successful in implementing equitable social policies have commented on the crucial role played by consensus-building among the population within their countries. This makes sense. To move forward with a policy agenda to achieve greater equity in health, we must achieve, within each of our societies, a societal consensus about justice, about the need to level the playing field, at least with respect to health. Discussions about equity in technical terms are essential to keep our research rigorous so that it provides the best possible knowledge to inform policy, but those discussions will not inspire the general public or policy makers. Each of us needs to find a way to articulate—in terms that will resonate in our own idiosyncratic societal settings—both the pragmatic and the ethical rationales for equalizing opportunities to be healthy. In shaping our own research agendas and in attempting to influence the research agendas of the institutions that fund research, we need to identify and address the most strategic gaps in knowledge needed to drive action toward greater health equity.

References


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