Social Determinants to Real Freedoms

An Empirical Development of the Capabilities Approach

by

Michael A. Trujillo

A PROJECT

submitted to

Oregon State University

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In the Capabilities Approach literature "capabilities" are the real freedoms individuals possess to achieve certain "functionings," which are the doings and beings that constitute a good life. I argue that this approach requires, or at least can benefit from, an account of the psychosocial mechanisms involved in capability limitation. The three mechanisms, or pathways, I consider include the cognitive resources perspective, the stress process model, and cumulative advantage and disadvantage theory. Each of these pathways begins with an individual's social characteristics and results in health outcomes with direct and indirect capability relations. Since these capability relations are distributed unequally according to individuals' social characteristics they are an issue of social justice and require policy attention. I highlight some policy recommendations made in the WHO Commission on Social Determinants of Health report and recommend policies to address the experiences of direct discrimination that report overlooks. I also explain some ways in which the pathways considered here can address two difficulties in the practical application of the capabilities approach, viz., measuring and selecting capabilities.

Key Words: Capabilities Approach, freedom, social justice, psychosocial stress, cognitive resources, cumulative advantage/disadvantage, social determinants of health

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I. INTRODUCTION

The Capabilities Approach put forth by Amartya Sen and Martha Nussbaum maintains that what matters for assessments of well-being, development, and justice are the freedoms, or real opportunities for well-being, enjoyed by individuals. Traditional approaches that focus instead on single-measure aggregative variables of societal well-being or formal opportunity are inadequate in this view. The basic idea behind this project is that if we take this argument about individual freedoms seriously, then we have to take seriously the various ways in which individual freedom may be limited. Furthermore, when these limitations systematically result from social factors outside of individuals' control, the state has a responsibility to address these factors in order serve justice.

In this paper I argue (i) that individuals' social characteristics limit their freedom as it is understood in the Capabilities Approach, (ii) that incorporation of three models that describe social factor-capabilities pathways promises to address certain difficulties in the practical application of the Capabilities Approach, and (iii) that the connection between individuals' social characteristics and freedom these pathways describe requires certain changes to public policy.

The three pathways I will focus on are the cognitive resources perspective, the stress process model, and cumulative advantage/disadvantage theory. The cognitive resources perspective describes how an individual's circumstances affect the finite amounts of attention and decision-making ability that individual has to divide between the demands they face on a daily basis. Scarcity of these resources limits individuals' freedom by restricting the opportunities they become aware of and limiting their ability to make a reasoned choice between them. In the stress process model individuals' social characteristics determine their personal and

social resources as well as their overall stress exposure. These personal and social resources then mediate the physical and mental health consequences of that stress exposure. If left unaddressed, the health consequences of high stress can loop back to diminish individuals' personal and social resources and thus reduce their ability to cope with future stress exposure. Cumulative advantage/disadvantage theory (CAD) explains how early social disadvantages accumulate over the life-course and across generations to widen disparities in rates of morbidity and mortality between differentially advantaged social groups. As in the stress process model, health consequences of disadvantage promote further disadvantage—a looping effect that partly explains the widening of health achievement gaps.

I argue that the effects of these processes show that the social determinants of health threaten capabilities beyond those strictly related to health, and limit individual freedom in a general sense by restricting individuals' capability sets overall. Incorporation of the cognitive resource, stress process and CAD pathways into the capabilities approach therefore gives insight into how different freedoms interrelate at the intrapersonal level. I argue further that incorporating these models addresses two well-known difficulties in the practical application of the capabilities approach, viz., measuring capability sets as opposed to functioning achievements and selecting the capabilities that are most critical for well-being. Lastly, I argue that the threat to basic capabilities each of these pathways describes provides impetus for particular policy recommendations in the social determinants of health literature.

II. The Capabilities Approach

Sen and Nussbaum agree on the most fundamental premises of the Capabilities Approach, but there are differences in the points they choose to emphasize and strategies they

adopt in overcoming certain conceptual issues. In this thesis I will therefore strive to make clear whose perspective I am referring to, though any concepts not explicitly attributed Sen's.

Origins

Sen developed the Capabilities Approach largely as a response to conceptual issues in the prevailing development frameworks of his time. Proper understanding of the Capabilities Approach therefore requires a brief overview of these origins.

Equality

One of Sen's founding premises is that every social theory with any sort of staying power needs to posit equality on some sort of level. Even theories that accept large distributional inequalities require equality in some other sphere to justify that arrangement. For example, libertarianism accepts large material inequalities among members of a given society so long as each of these members enjoys equal freedoms.[1] In fact, a good measure of the appeal of Rawlsian justice as fairness, Sen argues, is that it formalizes our intuition that individuals deserve equal regard on some sort of level.[2] So the idea that equality is necessary in a just society is not so controversial; rather, the debate is over what it is that is supposed to be equalized—what Sen calls the "space" of equality.[3] Seeking equality in the capabilities space, Sen argues, overcomes difficulties associated with seeking equality in the spaces of marginal utility or Rawlsian primary goods.

Critique of Utilitarianism

[1] See Nozick 1974. It is important to note that freedom is understood in the libertarian tradition in a negative sense (the absence of constraints), but understood in the positive sense (possibility to act) in the capabilities approach (Sen 1985, pg. 201). This positive interpretation will be discussed at length in the section titled *Sen's Conceptions of Freedom.*
[2] Sen 1992a, pg. 18
[3] Sen 1992a, pg. 15

Sen's primary critique of utilitarianism, is that it fails to account for individuals' actual freedoms and well-being.[4] For utilitarian approaches that seek equality in terms of marginal utility this failure doubly disadvantages individuals who convert resources to utility with less relative efficiency. In Sen's classic example we are asked to consider a physically disabled individual. It is easy to imagine that such an individual may require a greater income to achieve a certain level of utility (due to e.g. mobility constraints) than those without that that particular disability. This individual's per-unit income utility yield (i.e., marginal utility) is therefore lower than those without his or her disability. From a utilitarian perspective such an individual would not deserve any additional income since this income would yield greater marginal utility if given to someone else. Indeed, utilitarian approaches based on marginal utility stick any individual who is marginal utility disadvantaged with the double of disadvantage of receiving fewer resources for it.[5]

Utilitarianism's exclusive focus on utility as the relevant information for assessment of well-being is also problematic in terms of total, rather than marginal, utility. In this case utilitarianism fails to do justice for individuals who are able to attain utility despite limitations to their actual freedom. As an example we can again consider an individual with a physical disability. This time, though, suppose the individual is not disadvantaged in terms of experiencing utility because of an especially cheery disposition. This individual experiences the same utility as another without his or her disability despite encountering a great number of obstacles in mobility that significantly reduce his or her freedom to move about as he or she desires. Investment to remove some or all of these obstacles is unwarranted on the basis of total

[4] In his later work (e.g., Sen 1999, pgs. 62-63) Sen has developed some of the implications of this shortcoming beyond the critiques considered below, but these will be left aside in the interest of understanding the origins of his approach.
[5] Sen 1979, pg. 203-204

utility because the disabled individual experiences adequate utility despite them, which means the resources would be better spent somewhere else.[6]

This result may be particularly harmful in cases where individuals who belong to groups that have been historically oppressed have adjusted their desires to the harsh realities of their situation and are therefore much more easily satisfied.[7] For example, a married woman living some place where wives have historically not been allowed outside the home might express satisfaction with a marriage in which this is the case because she has internalized this expectation. The utilitarian must accept this woman's satisfaction as real well-being, despite the fact that her freedom is obviously limited. This is so because utilitarianism equates a mental state (utility) with well-being. Utilitarianism thus assumes a very narrow informational base, and excludes any information about the person's freedoms or achievements from directly figuring into the well-being calculation.[8]

Critique of Rawlsian primary goods

Sen's critique of the Rawlsian demand for equality in terms of primary goods is that this approach fails to account for the diversity of human beings. Different individuals will have different abilities to convert primary goods into well-being, so simply providing everyone with an equal level of these goods is insufficient for enabling equality of well-being. The pervasiveness of human diversity (psychological, physiological, religious, etc.) means that even a comprehensive and less-superficial list of primary goods (e.g. one that would include things like the social bases of self respect) would also be flawed in this way. The reason is that a primary goods approach focuses on the means of achieving well-being rather than on well-being

[6] Ibid., pgs. 217-218
[7] Sen 1985 pgs. 190-191; Sen 1992a, pgs. 54-55
[8] Sen 1985, pg. 175

itself. Sen argues that these ends can only be assessed through an accounting of what individuals are actually free to do and to be.

Key Distinctions

The following subsections outline the key definitions and distinctions in Sen and Nussbaum's versions of the capabilities approach. This explication will hopefully enable deeper understanding of the capability consequences the pathways considered below.

Strictly political

This point may seem obvious given that the capabilities approach is a movement in political philosophy, but it is worth noting that the capabilities approach is intended to operate solely on a political level. Both Nussbaum and Sen endorse the Rawlsian position that individuals should be free to form their own conceptions of the good life.[9] Nussbaum in particular stresses that the capabilities approach is intended to guide constitutional democracies in providing the social basis for a threshold level of well-being worthy of human dignity. Beyond this level individuals ought to be free to pursue whatever activities fulfill their idea of a good life. It thus entails no particular metaphysical beliefs, and is compatible with a wide variety of ethical systems.[10]

Capabilities and Functionings

One key definitional and conceptual distinction is that between functionings and capabilities. Functionings are the beings and doings that are constitutive of a person's life and therefore their well-being. Capabilities are the real freedoms individuals have to achieve particular functionings.[11] A critical notion in this definition is that of real freedom and here Sen and Nussbaum differ in their approach to describing just what this means. Sen opts to defend a

[9] Nussbaum 1999, pgs. 5, 51-55; Sen 1992a, pg. 83
[10] Ibid., pg. 74-75
[11] Sen 1992a, pg. 39-40

particular notion of freedom that will be discussed at length in next section. Nussbaum, on the other hand, addresses this issue by delineating her notion of capabilities into three types.

"Basic capabilities" are the innate precursors that have the potential to be developed into higher-level capabilities. These are the capabilities possessed by infants and may be as straightforward as sensory perception. "Internal capabilities" are the developed states of an individual that are sufficient for him or her to achieve certain functionings without the consideration of external factors. "Combined capabilities" are the internal capabilities of an individual taken with these factors, which include all the elements of that individual's circumstances that could bear on their freedom to exercise their internal capabilities.[12] An example will help to clarify the differences between these classes. A child may possess the basic capabilities to speak and form preferences, which would likely develop into the internal capability of voicing his or her opinion on specific political issues as an adult. That individual would possess the combined capability of freedom of speech if (among other considerations) this expression was tolerated by the government, seen as acceptable by his or her family, and provided with a public sphere in which to be aired.

In discussing functionings and capabilities Sen employs two other key concepts. He uses the term "functioning vector" to describe any combination of functionings that an individual can simultaneously achieve. Because functionings are the beings and doings that are constitutive of life, an individual's functioning vector represents that individual's life in a comprehensive way. Sen uses the term "capability set" to describe all the functioning vectors an individual has the real freedom to achieve. Evaluation of the functioning vector a given individual achieves amounts to an evaluation of their current level of well-being while an evaluation of that individual's capability set is an evaluation of his or her freedom to achieve well-being.

[12] Nussbaum 2000, pg. 85-86

Sen's Conceptions of Freedom

In describing what he means by real freedom in his definition of capabilities, Sen argues for a conception of effective freedom over a conception of freedom as control. [13] One's effective freedom is enhanced in any case in which a choice or action is taken in line with their preferences, whether or not they were the ones to actually choose it. In this way it involves a kind of counterfactual reasoning that may seem odd on the face of it. One of Sen's classic examples shows how this counterfactual reasoning is actually quite intuitive. Say two close friends get in a car accident and one of them sustains significant injury and is rendered unconscious while the other is merely shaken-up. The paramedics decide the injured friend is in need of immediate treatment for which there are two drugs available, drug A and drug B. The paramedics consult the injured person's friend and she advises treatment with drug A because her friend had previously said that for religious reasons he opposed all use of drug B. Thus, despite the fact that the injured person did not actually choose drug A (because he was unconscious), this decision was made in-line with his preferences. The counterfactual reasoning his friend engaged in while making this decision (viz. what drug would my friend choose if they were conscious to do so?) seems perfectly reasonable.

Sen's primary motivation for adopting this conception of freedom is that it is often impossible for individuals in modern society to exercise control over all processes that influence their opportunities to achieve well-being. If we were to demand that an individual's freedom could only be enhanced by choices they make themselves, we would not be able to analyze or influence freedom in those cases that they lack control.[14] Sen's classic example of this point is the case of an individual living in a country in which malaria is endemic. The implementation of

[13] Kaufman 2006
[14] Sen 1985, pg. 210

policies that successfully combat malaria in that country (and not entail any other significant cost) is likely out of the individual's control. Despite this, we can safely say that the implementation of these policies enhances the individual's freedom because the outcome is in line with what that individual would choose if he or she had the choice. A more straightforward way to think about this is that policies which control malaria expand individuals' capability sets by giving them the option to choose the functioning vector that includes living in that country *and* living without risk of contracting malaria.

The distinction between control freedom and effective freedom justifies many of the policy implications that the stress process model and cognitive resources perspectives entail. Just as the circumstances behind the disease risk individuals face by living in a malaria-endemic country are beyond their control, the social determinants of certain individuals' resource scarcity, stress exposure, and social disadvantage fall outside of their control. These individuals would, given the choice, choose functioning vectors that do not include the physical and mental health effects of chronic stress over those that do (all other functioning components of these vectors being equal).[15] Therefore, policies that address the social determinants of the pathways considered here enhance individuals' effective freedom in the same way that public-health policies that fight malaria do.

Sen has at times addressed certain conceptual issues in his approach by specifying this general definition of effective freedom (simply "freedom" from here on). In his early work, the distinction between agency freedom and well-being freedom shaped his views on the kinds of capabilities that are problematic from the perspective of justice. In short, this distinction allowed

[15] This assumption is justified if living without the harmful effects of these pathways is selected as a capability relevant to well-being. One of the goals of this thesis is to argue for making this selection, and it is my view this selection is likely to be made under any of the selection procedures considered below (see Section V).

him to account for the difficult cases in which an individual has the freedom to achieve well-being, but chooses instead a different functioning vector that they have good reason to value. A person who has adequate income and access to food to feed his or her self but chooses instead to fast as a form of political protest is one example. Such an individual is clearly better-off than one starving due to widespread famine. Sen argues that because the political protest chosen by the individual in the former case enhances their agency freedom, the reduction in well-being freedom that results from their fasting is unproblematic in terms of justice. In the latter case no such improvement in agency freedom attends the starving individual's reduction in well-being and we ought to see this as an issue of justice.

In his later work, Sen specifies five key "instrumental freedoms" in order to comment on specific areas of focus for development. These are political freedoms, economic facilities, social opportunities, transparency guarantees, and protective security.[16] Political freedoms include civil rights, political participation, and freedom of expression among other freedoms usually associated with liberal democracies. Economic facilities are the resources (e.g., adequate income) and conditions (e.g., free markets) that give individuals the opportunity to utilize economic resources to their own benefit. Social opportunities include all of the societal resources like education and health care that enhance individual's well-being freedom. Transparency guarantees are things like the right to disclosure that ensure individuals can trust one another and the state in their interactions and exchanges. Protective security is the social safety net that prevents individuals from falling into conditions that would prevent them from regaining freedoms lost in times of crisis. Sen argues that these freedoms are of special importance to development because they enrich lives both in and of themselves (they are important ends), and through the promotion of other freedoms (may be utilized as effective means). A good measure

[16] Sen 1999, pg. 38-40

of this instrumental quality results from the fact that these freedoms interrelate and complement one another. For example, expanded social opportunity in the form of increased access to higher education is itself a valuable expansion of the freedom individuals enjoy, but it also expands economic facilities by raising incomes. Sen focuses on interrelations like the one just described that operate at the societal level, but this project will describe one way in which freedoms can interrelate at the level of the individual.

Attainment Equality, Shortfall Equality, and Threshold Achievement

If we accept that capabilities are the relevant space in which to evaluate well-being and seek equality, questions remain about just what that equality would look like. Sen considers two approaches, attainment equality and shortfall equality. Attainment equality is an arrangement in which each individual receives the same base level of well-being regardless of his or her abilities to achieve any greater level of well-being. Shortfall equality, on the other hand, guarantees an equal amount of shortfall for each individual from the maximum level of well-being they could achieve. In the end, Sen argues for attainment equality with an eye towards aggregative concerns such as efficiency.[17] Nussbaum focuses less explicitly on equality than does Sen and therefore aims her Capabilities Approach at guaranteeing for each individual a threshold level of functioning achievement.[18] The general significance of this distinction is that Nussbaum's approach is only a partial theory of distributional justice, whereas Sen's is complete. The significance for this project is, however, is simply to point out that I will be adopting Nussbaum's threshold achievement ideal for two reasons. First, adopting this aim allows for the identification of injustices without requiring the endorsement of a complete theory of distributional justice. Second, Nussbaum's argument that accountable, elected governments

[17] Sen 1992a, pgs. 90-92
[18] Nussbaum 2000, pg. 12, 75

should provide the social basis of this threshold achievement motivates the policy recommendations made below.[19]

III. Pathways: Capability-Restricting Processes

The Stress Process Model

Recent work by Leonard I. Pearlin and R. Jay Turner has integrated research on various aspects of psychosocial stress into the stress process model (Fig. 1). In this model each individual's social characteristics determine their stress exposure, which then affects personal health. Personal and social resources mediate the magnitude of the effect of this stress exposure on health, and are themselves determined by both the individual's social characteristics and stress exposure.

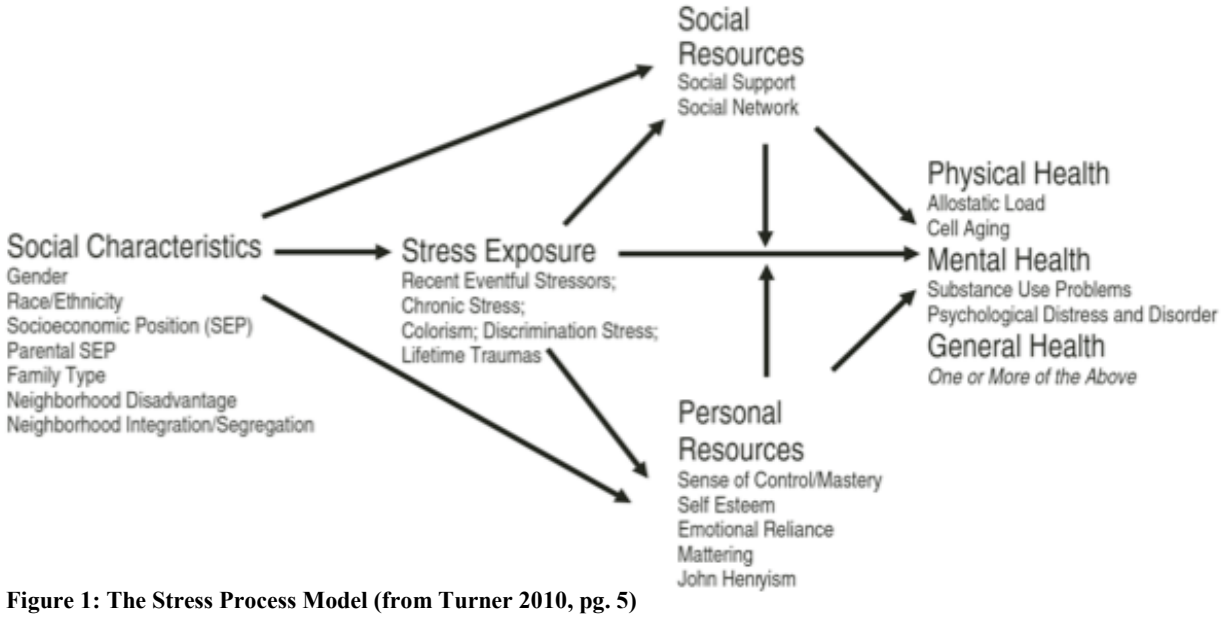

Figure 1: The Stress Process Model (from Turner 2010, pg. 5)

The stress process model was developed to address two shortcomings in previous attempts to describe the health effects of psychosocial stress. The first was the conception of stress as potentially positive or negative, which was impugned by research that found that only

[19] Ibid., pg. 104

negative stress seemed to matter for health.[20] The second was the idea that the health effects of stress mostly result from the acute stress that accompanies particularly challenging or traumatic life events. Research that found chronic stress to be a more powerful predictor of health outcomes empirically undermined this focus on life events. Furthermore, this focus seemed conceptually unsound in that it failed to appreciate the extent to which stress involved subjective assessments that were attuned to the individual's social circumstances.[21] The stress process model therefore represents a turn away from acute stress to chronic stress as the causative agent of health effects, and from life events to social characteristics as the determinants of stress exposure. These focal shifts make the health outcomes of the stress process model more of an issue of social justice because they make clear the fact that these outcomes result from socially determined and socially preventable sources. The following subsections will elaborate on this point and describe the critical elements of the stress process model in more detail.

Stress Exposure

The most well-researched social determinant of stress exposure is socioeconomic status (SES). In developing and developed countries alike, lower relative position in a socio-economic hierarchy is a predictor of greater stress exposure.[22] Race is another significant predictor. Individuals belonging to a racial minority are at a greater risk of stress exposure even after controlling for the confounding effect of disparities in SES among racial groups. Gender is also a significant predictor of stress exposure, though in the US this association is less straightforward than those between stress and SES and stress and race. Women generally experience slightly higher levels of overall stress exposure than men, but the sources of stress exposures differ from

[20] Elstad 1998, pg. 603
[21] Ibid., pg. 604; Thoits 2010, pg. S42
[22] Brunner 1997, Marmot et al. 1997, Wilkinson 1994, Wilkinson 1997, Wilkinson & Marmot 2003

those that typically beset men. Women report more experiences of recent and major life events, while men report more experiences of traumatic events, violence and discrimination.[23]

Each of these characteristics may either directly lead to stress exposure by exposing individuals to experiences of discrimination on the basis of that characteristic (in the case of gender and race), or more indirectly by determining the context of individuals' lives. Discrimination can occur through major episodes, such as being denied a job, or through chronic harassment that persists from childhood to old age.[24] The significance of experiences of discrimination in terms of health outcomes is profound, and will be discussed in more detail in the sub-sections on health outcomes below. The most salient example of the contextual influence of individuals' social characteristics is the tendency for these characteristics to determine the neighborhood in which they live. As Pearlin et al. (2005) point out, an individual's neighborhood largely determines the level of ambient stressors to which he or she is exposed. These ambient stressors include concerns over safety, transportation, access to services, and exposure to environmental hazards.[25]

The systematic nature of the associations between particular social characteristics and stress exposure is what makes the capabilities cost of stress an issue of social justice and what warrants and guides the policy recommendation made below. If stress and its attendant health consequences were more or less evenly distributed through the population (or as previously understood, the product of certain unfortunate life events), then it would be unclear why stress would warrant any special policy attention relative to other public health hazards. But the fact is that stress exposure results from factors that are both socially determined and preventable.

Personal Resources

[23] Turner & Avison 2003, pgs. 495-496
[24] Thoits 2010, pg. S44; Pearlin, Schieman, Fazio, & Meersman 2005, pg. 209
[25] Pearlin et al. 2005, pg. 208; Gee & Payne-Sturges 2004

An individual's social characteristics also initially determine his or her personal resources. These resources are the psychological qualities that mitigate the effects of stress exposure. Informally, we could say that these are the characteristics of an individual that make them more or less able to cope with stress. Individuals with a more extensive and robust set of personal resources will be more resilient to stress exposure, dealing with this experience in way that prevents it from being damaging to their mental or physical health. This resilience or, in the case of inadequate personal resources, a lack thereof appears to explain a good deal of the disparities in health outcomes of the stress process between social groups. For example, variation among social groups in rates of depressive symptoms can be almost entirely explained by variation in the availability of personal resources among these groups.[26]

The most influential personal resources are a sense of mastery, self-esteem, degree of emotional dependence, and a sense of mattering. Different researchers have characterized a sense of mastery in slightly different ways using a variety of terms (including positive notions such as "personal control," "effectance motivation," and "perceived causal relevance" as well as negative notions such as "helplessness," "hopelessness," and "fatalism"), but all of these characterizations more or less get at individuals' beliefs that their own decisions and actions can affect the world in the way they intended them to.[27] Self-esteem is the evaluation an individual makes and maintains of his or her self. Extended empirical study has shown that self-esteem has a consistent and significant mediating effect on mental health outcomes, and evidence is also mounting that demonstrates a similar, though weaker, effect on physical health outcomes. Emotional reliance describes the extent to which an individual depends on the appraisals of others for the formation of their self-concept. Greater degrees of emotional reliance are

[26] Turner, Lloyd & Roszell 1999
[27] Turner & Roszell 1994, pg. 181; Elstad 1998, pg. 605

associated with greater susceptibly to the negative health outcomes of stress exposure. "Mattering" refers the extent to which an individual believes that he or she is relevant to others. This relevance does not necessarily include a positive appraisal, which is evident in the association of greater degrees of mastery with depressive symptoms. [28]

Social Resources

Social resources are the qualities of an individual's network of personal relationships that limit the conversion of stress exposure into deleterious health outcomes. They may function directly by providing a supportive environment for an individual to work through stressful experiences, or indirectly by enhancing or diminishing personal resources such as self-esteem or mattering.[29] Accordingly, individuals may experience the protective effect of social resources from extensions of actual support from their social network, or merely the perception that this support is available.[30] To put this in more familiar terms, actually having a meaningful conversation with a friend may help someone cope with stress, but so too will knowing that he or she has friends who are willing to have such a conversation. It is not surprising then that only those personal relationships that are supportive or perceived to be supportive provide social resources.[31] Abusive relationships, for example, may increase stress exposure and degrade personal resources.

There are two ways in which individuals' social resources are influenced by social factors. First, individuals' social characteristics set the context in which they form and maintain their network of personal relationships. As in the analysis the social determinants of stress

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[28] Turner 2010, pg. 12-13
[29] Ibid., pg. 11; Pearlin, Menaghan, Lieberman, & Mullan 1981, pg. 340
[30] Thoits 2010, pg. S46; Support in this context is best defined as "information leading the individual to believe that he or she is loved, wanted, valued, and esteemed…" (Turner & Roszell 1994)
[31] Turner 2010, pg. 12

exposure, neighborhoods again figure prominently as contextual elements. Level of parental care is also a critic contextual element. Individuals with parents who are, for one reason or another, able provide a higher level of parental care see protective effects against the deleterious health outcomes of stress.[32] The second way in which social factors may influence an individuals' social resources is by determining the overall social cohesion of the society in which they reside. Individuals living in societies with a high degree of social cohesion are more able to form the kinds of personal relationships that provide social resources. Inequalities and authoritarian structures in all realms (e.g. economic, educational, and political) may impair social cohesion by establishing relationships between individuals that are predicated on preserving these hierarchical structures. Such relationships are unlikely to be supportive, and may in fact degrade certain personal resources such as self-esteem or mastery.[33]

Physical Health Outcomes: Allostatic Load

The allostatic load model describes how stress exposure that overwhelms an individual's personal and social resources can cause severe health effects if sustained for long periods of time. Typically, primary stress response mediators such as cortisol, epinephrine, and norepinephrine create a state of allostasis, altered physiological conditions, which allows stressors to be resolved. However, when stressors are not promptly resolved—as in the case of chronic stress—prolonged allostasis reduces the effectiveness of the response to primary stress mediators. Over time the physiological effects of this reduced response results in allostatic load.[34] The most immediate outcomes of allostatic load include elevated blood pressure, larger waist-hip ratio, higher cholesterol, reduced immune capacity, and lower glucose tolerance. The

[32] Pearlin et al. 2005, pg. 207
[33] Elstad 1998, pgs. 609-611
[34] McEwen and Stellar 1993

ultimate outcomes of allostatic load may include hypertension, cognitive decline, diabetes, and cancer.[35]

Mental Health Outcomes

The mental health outcomes of the stress process may include psychological distress and disorder, depression, and substance abuse.[36] The distribution of these health outcomes differs slightly according to the social characteristic under consideration. Men and women experience similar rates of mental illness due to stress overall, but women experience higher rates of psychological distress, anxiety, and mood disorders while men experience higher rates of alcohol and drug abuse, aggression, and anti-social behavior. Despite the additional stress exposure of discriminatory experiences, individuals who belong to racial minority groups experience equal or perhaps lower levels of mental health outcomes (though much higher levels of physical health outcomes). Most straightforwardly, individuals of lower SES experience higher rates of all types of mental health outcomes.[37]

Cognitive Resources

Recent work in psychology has studied the finite amounts of attention and decision-making ability each individual has to divide between the demands they face on a daily basis. These cognitive resource models have provided further insight into how one's circumstances determine the availability of these resources. In a series of laboratory experiments Shah, Mullainathan, and Shafir (2012) demonstrated that perceived resource scarcity seemed to force individuals to focus on this scarcity, leaving less attention for other tasks and demands. For

[35] Lupien et al. 2006, pg. 588; other prominent researchers of the effects of allostatic load have referred to its health outcomes as 'biological weathering' to express the idea that allostatic load slowly erodes health over time. See Geronimus 1992 and Geronimus, Hicken, Keene, & Bound 2006
[36] Turner 2010, pg. 10
[37] Thoits 2010, pg. S43-S45

example, individuals playing a version of *Wheel of Fortune* who were given fewer guesses per round were more fatigued by the end of the game than those given more guesses, despite having spent less time with the game overall. This suggests that those with less guesses used up more cognitive resources during the game.

In another experiment four groups played a version of Angry Birds. Two of these groups were "rich," (given an ample number of shots per level) and two of these groups were "poor" (given barely enough shots per level). One of each of the rich and poor groups could borrow shots from future levels, while the other group could not.

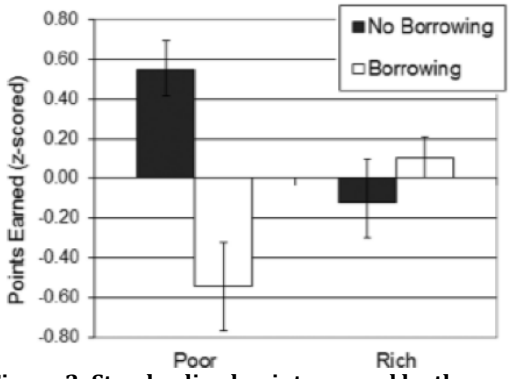

Figure 2: Standardized points earned by the rich and the poor. Error bars represent SE of the mean (from Shah, Mullainathan, and Shafir 2012, pg. 683)

Figure 2 shows that the poor group that could not borrow performed best followed by the rich group that could borrow, then the rich group that could not borrow. The poor group that could borrow performed by far the worst. These results suggest that the focusing effect of having fewer shots benefitted the poor group that could not borrow, but undermined the poor group that could borrow by preventing them from attending to the consequences of their borrowing. Borrowing worked to the benefit of the rich, however, since the consequences of this borrowing were minimal. Mani, Mullainathan, Shafir, and Zhao (2013) corroborated these laboratory results with field experimentation. In a study of sugarcane farmers in the Indian state of Tamil Nadu, farmers performed better on tests of cognitive performance after harvest than before harvest when monetary resources were scarce.[38] These results persisted even after controlling for training (the

[38] Cognitive performance was measured using Raven's Progressive Matrices as a test of fluid intelligence and a modified version of the Stroop task as a test of cognitive control. (Mani et al. 2013, pg. 979)

improvement expected simply from the fact that the post-harvest test was the farmers' second time taking the assessment), nutrition, and stress.[39]

Mullainathan and Shafir (2013) have distilled the process demonstrated by the experiments described above in a way that will be useful for analyzing its consequences in terms of capabilities. They use the term "bandwidth" to represent the volume of cognitive resources an individual has available at any one time. These resources include both cognitive capacity, the ability to problem solve and reason critically, and cognitive control, the ability to manage cognitive activities to attend to different tasks.[40] They use the term "focusing" to describe the attentional shift caused by perceived scarcity and the term "tunneling" to describe the exclusionary consequences of this shift. Applying this terminology to the Angry Birds experiment described above, we could say that the poor group that could not borrow experienced reduced bandwidth from the perceived scarcity of shots, but benefitted from the focusing effect of this perception. The poor group that could borrow, in contrast, sustained heavy consequences from the tunneling effect of their perceived scarcity. Over-borrowing to do better on earlier rounds left them with too-few shots by the end of the game, causing them to miss out on easy points. The rich groups did not experience a reduction in bandwidth and therefore neither benefitted from focusing, nor suffered from tunneling.

Cumulative Advantage/Disadvantage

The final pathway I will consider through which the social determinants of health come to limit freedom is cumulative advantage/disadvantage theory (CAD). Work on this theory was inspired by the observation that scientists with better reputations, success earlier in their career, and associations with more prestigious journals are more likely to have their work cited by other

[39] Differences in levels of heart rate and blood pressure, dependable biomarkers of stress, could not fully account for the variation between pre and post-harvest scores. (Ibid., 980)
[40] Mullainathan and Shafir 2013, pg. 47

studies.[41] Thus, those with early advantages receive benefits that confer further advantage such that inequality between those with and without early advantages grows over time. Dannefer (1987) distilled CAD in its contemporary form by combining this basic mechanism of the accentuation of advantage/disadvantage with a life-course perspective that had been developed to address confounding historical factors in inter-cohort studies. Aging, he argued, ought to be seen in terms of the social processes that produce intra-cohort variation and inequality. These processes are instituted in socializing organizations that such as school and work and include tournament mobility and interorganizational compounding. Tournament mobility is the advancement pattern in which the winners move on to the next level and the losers forfeit their chances for future advancement. This pattern is supported by the inverse relationship between job tenure and promotion chances. Interorganizational compounding is the tendency for those who are most successful in one institution to be favored in selection for transition to the next institution. The tendency of early-achieving scientists to secure greater funding from organizations outside of the one in which they work is one example of this effect.

CAD studies focusing on a number of social characteristics have shown it to be a pervasive feature of society. House, Lantz and Herd (2005) found that socioeconomic status causes health inequalities via the mechanism shown in Figure 3.

[41]Merton 1968 as presented in Dannefer 2003

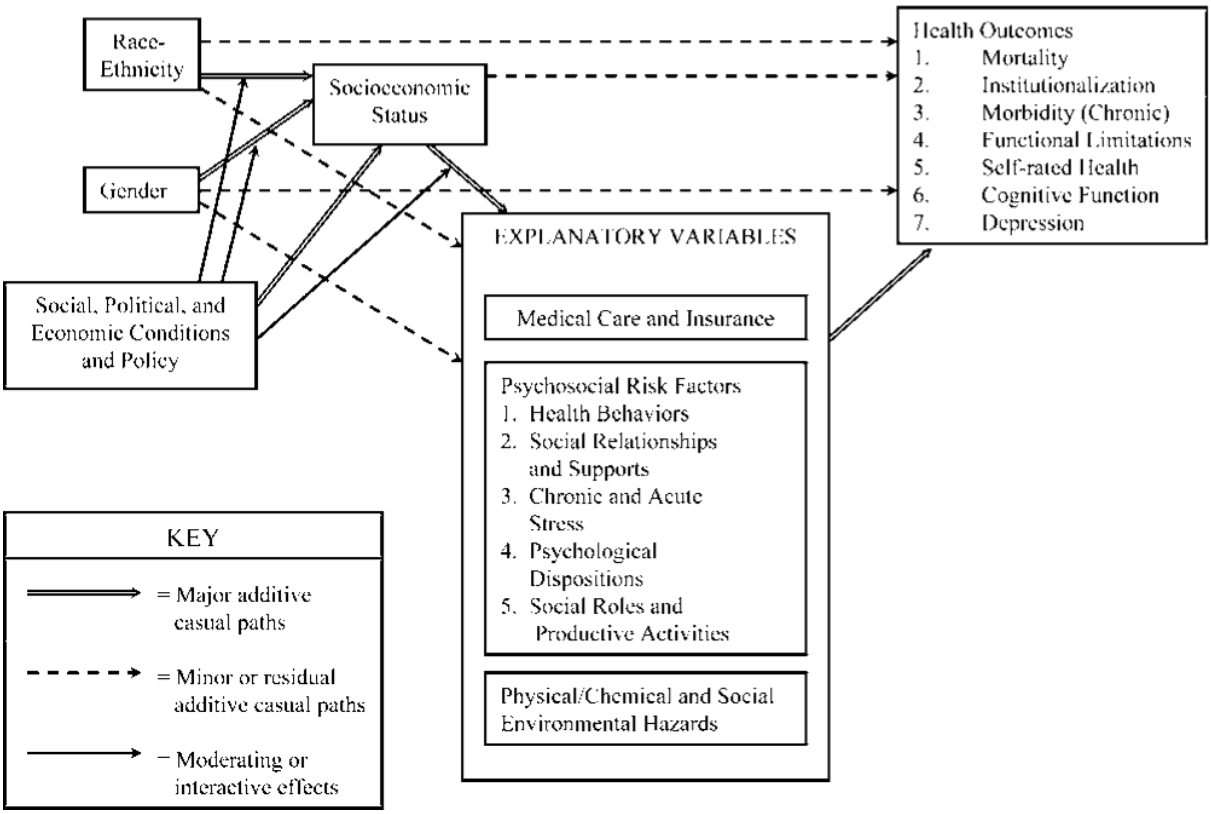

Figure 3: CAD Conceptual Framework (from House, Lantz & Herd 2005, pg. 17)

In an effort to observe the CAD process at work in education, Ross and Wu (1996) found that health disparities between those with differential educational advantage increase with age, over and above the effect of childhood household income.[42] This suggests that CAD may work through multiple variables at any one time (in this case education and SES), to compounding effect. Other variables may play a less independent role in the accumulation of disadvantage. For example, Ferraro and Kelley-Moore (2003) found that obesity in adulthood is associated with lower-body disability 10, 20, and 50 years later. Noting that individuals of lower SES are more likely to be obese, Ferraro and Kelley-Moore conclude that obesity may be an important mediating variable between SES and health. These findings support a picture of the overall

[42] Where health was measured in terms of basic physical ability and self-reported health, and education was measured in terms of years of education; see also Walsemann, Geronimus, & Gee 2008

accumulation of social disadvantage much like Figure 3 in which several major and minor additive pathways and moderating effects work between different social characteristics and variables. Though more research is needed to understand the specific nature of the relationships between particular characteristics and variables, it's clear that the basic mechanism of CAD is a major driver of inequalities and, ultimately, health disparities. In the next section I argue that these disparities and the basic CAD mechanism significantly restrict capabilities.

IV. Capabilities and Freedom

It is first and foremost critical to recognize that perceived scarcity, psychosocial stress, and social disadvantage are all poor functioning attainments. They are in this sense bad in and of themselves. This fact about their functioning quality therefore requires at least some sort of policy attention because each is largely socially determined. The question then is why should we devote any more attention to addressing these pathways than what we should devote to any other poor functioning achievement? Why do the pathways considered above warrant special consideration? The answer is that unlike most other functioning achievements the capabilities, the cost of these pathways is two-fold. First, they directly restrict capabilities related to health and life. Second, they limit individuals' real opportunities and thus shrink the overall size of their capability sets. I will follow LaVaque-Manty (2001) in calling the former a "direct capability relation," and the latter an "indirect capability relation." In what follows, I will explain how each of the pathways considered above figures into each of these relations. I will conclude this section with a discussion of another reason why the pathways considered here warrant special attention at a policy level—these pathways interrelate such that amelioration of their deleterious effects has great instrumental value in enhancing capabilities.

Direct Capability Relation

Analyzing the direct capability relation of stress in terms of capability sets is fairly straightforward in cases where an individual's social characteristics unavoidably result in chronic stress.[43] Individuals experiencing high levels of psychosocial stress do not have the opportunity to live a life free of the allostatic load or other health effects of psychosocial stress and do not have the freedom to live as long as they could without stress. This limits their capability set to those functioning vectors that include these health consequences. This situation is analogous to Sen's example of an individual living in a country of endemic malaria. Just as the capability set of an individual in that setting is restricted by the fact that they cannot co-realize the functionings of living in their country of choice and living free of the risk of contracting malaria, an individual living with the health consequences of psychosocial stress cannot co-realize the functionings of living in their current social setting and living a life free of stress. The upshot of this analogy is just what Sen intended to demonstrate with the malaria example—policy implications that ameliorate this capability set reduction really do enhance individuals' (effective) freedom.

Analyses taking this same form apply to perceived scarcity and disadvantage when individuals' social characteristics make these unavoidable as well. It is important to note, however, that individual disadvantages are not really what CAD theory explains. Rather, CAD is a description of how many different types of disadvantages affect individual well-being and freedom over the life-course beyond the effects of each of these disadvantages sustained independently. This is just what CAD theorists mean by "cumulative." In this sense CAD doesn't have a direct capability relation of its own. It is an explanation of the indirect capability relation of many different direct of capability relations that occur over the life-course.

[43] By "stress" here and in the remainder of the discussion I mean a level of stress sufficiently high and sustained so as to cause the mental and physical health outcomes described by the stress process model. My argument is not aimed at any level of stress whatsoever.

Indirect Capability Relation

Cognitive resources most immediately and straightforwardly describe a pathway of indirect capability reduction. By reducing an individuals' bandwidth and focusing their attention, perceived scarcity limits that individual's ability to see all of their options. Simply put, if an individual overlooks their opportunities to achieve certain functionings because of the effects of perceived scarcity, we should not say that this person had this opportunity at all. LaVaque-Manty (2001) takes this perspective in arguing that eating disorders pose a politically problematic[44] threat to capabilities. He explains that the hunger that results from these disorders is an "unwelcome and unchosen priority" that limits personal agency. Thus, LaVaque-Manty argues, eating disorders impair capabilities beyond those affected by their immediate health consequences by limiting personal agency. This argument highlights the importance of the fact that what matters in terms of cognitive resources is the *perception* of scarcity and not necessarily scarcity itself. Individuals with eating disorders likely have access to a sufficient quantity of food, but their hunger induces a perception of scarcity that results in cognitive resource depletion. As a test of this point Mullainathan, and Shafir (2013, pgs. 49-51) induced perceptions of scarcity in an experiment in which they asked subjects to imagine their car needed an expensive repair. Merely posing this hypothetical situation was enough to evoke the very same patterns of cognitive resource depletion observed in situations of genuine scarcity. So whether it is hunger, a hypothetical situation, or actual resource scarcity that induces it, perceived scarcity invariably limits personal agency, and therefore capabilities, in the way that LaVaque-Manty describes.

[44] It is politically problematic so long as we accept that eating disorders are at least partially determined by social norms related to thinness which women have little choice over accepting and that the disorder risk is unequally distributed due to the focus of these norms on women.

Psychosocial stress has at least two indirect capability relations. First, it often requires that individuals' sacrifice their health for other aspects of basic well-being. This is a case that Nussbaum would see as a trade-off of incommensurable basic capabilities. Recall that for Nussbaum an adequate social minimum of well-being cannot be established by trading off excesses of one type of capability for more of another in which there is a deficit. Thus a government that claims to provide an appropriate social minimum for its citizens but requires them to access this minimum through inherently stressful means will inevitably introduce trade-offs of this type. This undermines the government's claim that it has provided an adequate social minimum. Given the inclusivity of Nussbaum's capability list, however, it is hard to imagine such a scenario in which a social minimum would have been provided were it not for the trade-offs introduced by stress. Indeed, by including capabilities such as affiliation, play, and control over one's environment, Nussbaum builds in concern for individual's psychosocial condition. This concern is one of the reasons integrating stress into the capabilities approach is justified. I will consider Nussbaum's perspective below in speaking on the practical benefits of this project, but will now offer an analysis of the indirect capability relation of stress from Sen's perspective.

One could argue that the trade-off between health and success is unproblematic due to Sen's distinction between well-being freedom and agency freedom. It doesn't seem to be an issue that, for example, a corporate lawyer must sacrifice some measure of general health via the stress process in order to make partner at her firm. This is clearly a case in which an individual is sacrificing some measure of their well-being freedom in order to pursue her idea of the good life and enhance her agency freedom. But such an individual would also have plenty of other opportunities that would not entail this loss of well-being freedom. This is true of all such cases for which we would want to make this argument because having other options is part of what

exercising agency freedom means. Thus, under conditions in which an individual does not have any other options besides those that are stress inducing (and thus health diminishing), the agency freedom argument falls flat. Such an individual could only be said to be pursuing his or her well-being freedom to which the health impacts of stress are serious limitations. The fact that low relative socioeconomic status, membership in a racial minority group, and being female all increase stress exposure means that these social characteristics limit the options for stress-free lives available to individuals for which they apply. Thus, these social characteristics entail a capabilities cost through the stress process model. This cost is an issue of social justice because it is both unfair and preventable.

The second indirect capability relation of psychosocial stress results from the looping mechanisms whereby the health consequences of stress exposure reduce social and personal resources. Since these resources are themselves important capabilities, these looping mechanisms are pathways of indirect capabilities reduction. Take for example an individual who develops social anxiety as a consequence of sustained stress exposure. This social anxiety may reduce that individual's self-esteem and could significantly impair that individuals' capability to form a supportive social network. Using Nussbaum's list of basic capabilities momentarily for the sake of the example, we can see this outcome significantly impedes at least the basic capabilities of affiliation and emotional development. Stress exposure could thus impede basic capabilities beyond those related to bodily health via the looping effect described by the stress process model.

The looping effect of the health outcomes of psychosocial stress hampers capabilities on another level. Turner and Roszell (1994) speculate that the reduction of these resources not only reduces individuals' ability to cope with future stress exposure, but also inhibits individuals from

engaging in activities that may restore or promote these resources. Research into CAD reveals that this is indeed the case, and that this process is not limited to stress exposure. Those with early disadvantages in factors such as socioeconomic status, education, and body weight accumulate further disadvantages over the life-course. The tournament mobility pattern of CAD processes means that the accumulation of these disadvantages disqualifies individuals from future capability. In some cases (as in that of obesity) this capability cost is steep (lower body disability).[45] This indirect capability relation of cumulative disadvantage is therefore profound.

Interrelation and Instrumental Freedoms

The three pathways considered above, and their attendant capability costs, interrelate in a number of ways. Stress and social disadvantage interrelate because social disadvantages result in stress, which then impacts health, creating further disadvantage. Stress is thus one of the major mechanisms through which disadvantage accumulates over the life-course, and these disadvantages are themselves predictors of stress exposure.[46] Similarly, the tunneling and bandwidth-tax effects of perceived scarcity may cause stress, and high levels of stress may exacerbate perceptions of scarcity. Social disadvantages that involve some sort of resource scarcity trigger tunneling and bandwidth tax effects that impede cognitive performance and increase the likelihood of further disadvantage.[47]

The upside of these interrelations is that interventions addressing one of the pathways will likely have beneficial effects for the others as well. In this sense cognitive resources, personal and social stress coping resources, and social advantage (or simply lack of disadvantage) are analogous to the instrumental freedoms Sen considers in *Development as*

[45] Ferraro & Kelly-Moore 2003
[46] Thoits 2010, pg. S46
[47] This interrelation was the key finding of Shah et al.'s (2012) lab study and led them to offer the cognitive resources perspective as an explanation of why financially vulnerable individuals make risky or short-sighted financial decisions

Freedom. Understanding this instrumental potential is critical for crafting policy that will most effectively address the capability restrictions associated with perceived scarcity, stress, and social disadvantage.

V. Practical Applications of the Capabilities Approach

The pathways considered above hold great potential to improve the practical application of the capabilities approach. The following two issues have attracted extensive attention in the capabilities approach literature, and though they involve theoretical considerations, they result from the practical application of the capabilities approach.[48]

Measuring Capabilities

One pervasive issue in practical applications thus far has been the inability to measure capabilities as opposed to achieved functionings. It is much easier to collect data on what a person is actually doing and who they actually are than it is to gather data on their opportunities to be and do certain things.[49] This asymmetry is a serious issue because, as explained above, there is an intrinsic value to the freedom associated with an individual's capability set (what Sen would call the "constitutive" quality of freedom) that their functioning achievement doesn't fully capture. Practical applications that focus only on the latter therefore do not permit the full force of capabilities approach to be applied.[50]

There are at least two ways in which the stress process model could help to address the measurement issue. First, it could be integrated with existing methodologies to improve extrapolations from achieved functionings to capabilities. Evaluating an individual's stress level and allostatic load could serve as an indicator for the conditions under which they achieved their

[48] See Robeyns 2011 for helpful review of this literature
[49] Robeyns 2006
[50] Some notable recent efforts to address the measurement issue include Anand & van Hees 2005 and Martinetti 2000

current level of functioning. High levels of stress should cast doubt on the extent to which we should understand the functioning achieved as one chosen freely from a fully realizable capability set. Second, stress measures could be used to give internal validity to self-reported measures of individuals' capabilities. Again, high levels of the outcomes associated with psychosocial stress would discredit positive capabilities self-evaluations. Such a response would raise concerns that the positive evaluation was in fact the result of preference deformation. Assessments of cognitive resources could help in these same two ways, although assessment of these resources would involve administering a test similar to those used by Mani et al. (2013) in their study of Indian farmers.

Incorporating CAD into the capabilities approach holds great promise for measuring and modeling capabilities in a way that could be useful for crafting policy. Long-term studies could establish correlation between certain social disadvantages and functioning achievements such that an individual's capabilities (given as the functioning achievements the model predicts for the future) at any one time in their life-course could be measured. This would of course require a massive amount of data and a model the sophistication of which is well beyond my own expertise, but given the promise of this method I do recommend it as an area for future research.

Selecting Capabilities

Understanding of the stress process model may also aid in selecting relevant capabilities. This is a point on which Sen and Nussbaum differ considerably, and so their perspectives will be considered separately. For each author I will consider how the pathways considered in this project could inform the selection of basic capabilities and also the selection of capabilities that are instrumental to realizing these basic capabilities in particular contexts. I will also consider the

perspective of David Crocker, whose work in deliberative democracy represents a prominent contemporary movement in the capabilities approach literature.

The incorporation of the three pathways considered in this project is in line with Nussbaum's motivation for her list of basic capabilities, viz. ensuring a quality of life respectful of human dignity.[51] In thinking about what capabilities would ensure this quality of life, the cognitive resources and stress process models—as empirical facts about how humans get on in the world—should be considered. Just as the "body that gets beaten is in a sense the same all over the world," the body that experiences stress, resource scarcity, and the accumulation of disadvantage is the same all over the world.[52] As mentioned above, to a first approximation Nussbaum's list includes many of the basic capabilities the empirical evidence provided by the pathways considered here would recommend—a result of her concern for psychological well-being and attention to social disadvantage. These considerations are evident in Nussbaum's narrative introduction to her list in *Women and Human Development.*[53] This project therefore gives empirical support to Nussbaum's list, or to one at least as inclusive.

Second, the stress process model could help in selecting the specific capabilities most relevant to supporting basic capabilities in a particular context. Nussbaum maintains this level of selection as a source of flexibility in her approach, giving it what she calls "multiple realizability."[54] Consideration of the pathways considered here and the various measures they employ (levels of sustained primary stress-response hormones, for example) could guide assessments of just how successful separate realizations of basic capabilities in fact are.

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[51] Nussbaum 1992
[52] Nussbaum 2000, pg. 23
[53] Ibid., pgs. 15-24, 106-110
[54] Ibid., pg. 77

Much of Sen's early work was devoted to establishing capabilities as the proper space for evaluations of well-being and only recently has he addressed the selection issue in earnest. For Sen, the selection of basic capabilities is part of what he calls the constructive role of democratic freedoms. This constructive role is what allows for public participation in the identification, selection, and debate over societal needs, values, and priorities.[55] This public participation, when properly exercised, allows for minority and oppressed groups to dissent of marginalizing policies and voice concerns over their circumstances. The discussion this dissent generates is critical to refining public opinion and ensuring the needs of minority groups are considered in the formation of public opinion. We cannot, Sen argues, "take preferences as given independently of discussion, that is, irrespective of whether open debates and interchanges are permitted or not."[56] So for Sen, the democratic selection of relevant or basic capabilities preserves the constructive role of political freedoms. The pathways considered above could aid this democratic process in a number of ways. First, a Sen himself recognizes, health is vitally important to ensuring that individuals can participate in democratic institutions to the fullest potential. Health and political freedom interrelate in a significant way. Thus, preventing the health consequences of psychosocial stress will improve individuals' capabilities for democratic participation and preventing disadvantage from accumulating over the life course will ensure better and increased participation into old age. The indirect capability relation of perceived scarcity (namely, a reduction in personal agency through the tunneling effect) limits the extent to which an individual can realize the full potential for his or her own democratic participation.

Following Sen's emphasis on the importance of democracy in the process of capabilities selection, David Crocker (2007) has argued that this process ought to embody the ideals of

[55] Sen 1999, pgs. 148, 246
[56] Ibid., pg. 153

deliberative democracy. In deliberative participation both elites and non-elites construct and scrutinize proposals in order to come to agreements that a majority will accept. This contrasts with less participatory forms of participation such as consultative participation and bargaining in which elites control more of the evaluative and decision-making processes.[57] Crocker identifies two obstacles to the implementation of deliberative participation—inequality and unwillingness to deliberate. The two are not independent, however, as many case studies show that group members will make accommodations for inequality, such as inviting members of underrepresented groups, when willingness to deliberate is high.[58]

The pathways described here could thus play an instrumental role in addressing these obstacles to implementing a deliberate process of relevant capabilities selection. The psychological consequences of scarcity threaten willingness to deliberate by limiting the cognitive resources individuals have to devote to deliberative participation. Invitations to groups underrepresented because of resource scarcity of some type should therefore include some sort of compensation to increase willingness to deliberate. Without such compensation it is unlikely that individuals experiencing the effects of scarcity would have the cognitive resources to devote to participating at all, much less doing so effectively. Similarly, measures that protect individuals' personal and social stress coping resources should also foster willingness to participate because, to a first approximation, resources like self-esteem, a feeling of efficacy, and social support are critical to the sort of negotiation and dialogue deliberative democracy requires.[59] Monitoring group dynamics would be critical to this end. Addressing mechanisms of

[57] Crocker 2007, pg. 433
[58] Ibid., pg. 451
[59] It is in fact easy to see how deliberative participation could create a *beneficial* feedback loop with respect to personal and social stress coping resources. The success of a properly functioning, deliberately participating group would likely boost the self-esteem and self-efficacy of its members who may also form socially supportive networks within the group. These

cumulative advantage/disadvantage to reduce levels of systemic inequality would preserve deliberative participation in the long haul. Realizing each of these instrumental benefits requires working to mitigate the social origins of the pathways considered here. The next section will focus on recommendations on how this might be accomplished.

VI. Policy Recommendations

Social injustice is killing people on a grand scale.

-WHO Commission on Social Determinants of Health (2008)

The literature on policy recommendations for addressing the social determinants of health that underlie the pathways described above is extensive. A full review of this literature and therefore a comprehensive set of recommendations are beyond the scope of this paper so I will instead focus on the report recently issued by the WHO Commission on Social Determinants of Health (CSDH). In what follows I will draw attention to certain policy recommendations in this report that seem especially urgent in light of the capabilities perspective considered above. At the end of this section I will consider Navarro's compelling critique of the report, arguing that the present project endorses his main criticism in part.

Key Policy Recommendations of the CSDH Report

The CSDH report identifies three focal areas: improving daily living conditions; tackling the inequitable distribution of power, money, and resources; and ongoing measurement and assessment of actions taken. To improve daily living conditions, CSDH calls for equity in early life, fair employment and decent work, social protection over the life-course, and universal healthcare. To tackle inequitable distribution, CSDH calls for formal adoption of health equity as

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outcomes would then promote further participation by increasing willingness to participate, and the cycle could then continue.

a guiding principle in government, fair financing, market responsibility, gender equity, political empowerment, and good global governance.

The capabilities consequences of CAD warrant the emphasis given to overcoming inequalities in early life. Indeed, the CSDH explicitly discusses disadvantages over the life-course in explaining the evidence and rationale for this focal area. One specific policy recommendation in this area that is especially well-supported by the foregoing analysis is the integration of social/emotional learning into the curricula of universal primary education. This learning is critical to developing the personal and social resources that mitigate the health consequences of stress exposure according to the stress process model. Building these personal resources in early childhood is one way in which the interrelation of the capability relations of psychosocial stress and social disadvantage could be used to profound beneficial effect. Greater resilience to stress exposure limits the accumulation of social disadvantage, which in turn provides greater resiliency to stress exposure by protecting personal and social resources. Early development of social and personal resources is in this sense an important *advantage* that can accumulate over the life-course. CSDH's call for prioritizing interventions for disadvantaged children is particularly advisable in this regard, as is the call for universal social protection over the life-course.

In fact, all of the pathways considered here lend considerable credence to the CSDH recommendations for providing universal social protection over the life course. From a stress process/CAD perspective this protection prevents the depletion of personal and social resources and the accumulation of disadvantage. In terms of cognitive resources this social protection mitigates the harmful capability relations of tunneling and bandwidth reduction that result from resource scarcity. This perspective emphasizes the need for social protection to be both universal

and adequate to the real cost of living because it is the perception of scarcity that really counts in terms of capabilities restriction.[60] From a political perspective, putting this particular recommendation in terms of freedom through capability relations may be particularly valuable as the implementation of these measures is usually framed as entailing a loss of freedom.

Within the CSDH's call for fair employment and decent work, the recommendations that decent work ought to entail a low level of work-related stress and allow for work-life balance are particularly well-supported by the capability relations of psychosocial stress and perceived scarcity. Here again as in universal social protection, these recommendations serve to protect and enhance the personal resources that mitigate the capability consequences of stress exposure. Working in precarious or marginalizing circumstances will inevitably affect individuals' sense of mastery and self-esteem in ways that lead to health consequences and capability reduction through the stress process. Unlike universal social protection that (directly at least) ameliorates perceptions of scarcity of monetary resources, these recommendations for decent work against scarcity of other resources, such as time or expertise. Having no choice but to work in an environment with high levels of work-related stress often involves feeling that one has insufficient time or training to complete the required. Since the psychological effects of perceived scarcity result from scarcity of any resource, such conditions will trigger these effects and invoke their attendant capabilities consequences. This policy endorsement is one of the most intuitive—it's not just any work that enhances individual freedom, it's decent work with decent pay.

The CSDH call for political empowerment is critical from a capabilities perspective. Sen maintains that the instrumental role of political freedom for securing other freedoms should

[60] See Van Parijs 1995 for some reasons why adopting universal social protection, specifically universal income, is also economically feasible and defensible

make it a preeminent aim for development rather than a luxury to be enjoyed once a certain standard of living has been achieved.[61] The pathways considered here support the instrumental value of political freedoms and therefore endorse the emphasis they receive in the CSDH report. The policies the CSDH recommends for equal inclusion of all and empowerment of marginalized groups will undoubtedly reduce the stress exposure and enhance the personal resources of these groups, thereby improving their health and capabilities. The South Australian Social Inclusion Initiative highlighted in the CSDH report is one promising example of a way in which equal inclusion may be achieved. This initiative includes an independent board made up of community leaders that directly advise the Initiative and South Australia's head of state. This gives community members a more direct input to the decision-making process.[62] The inclusivity of existing political institutions will be improved by policies that aim to provide the material resources required for a level of well-being that enables meaningful political participation. Lastly, from a CAD perspective, lack of political representation and opportunities for participation are major social disadvantages. Policies that mitigate these conditions to prevent their accumulation over the life-course will expand individuals' capabilities in the long-term.

Lastly, this analysis strongly supports the CSDH call for gender equity. In fact, any capabilities perspective properly applied will endorse such a call on the basis of the gross gender-based disparities in real freedoms worldwide. Both Sen and Nussbaum's work originated from attempts to address these disparities, so endorsement of gender equity is really the capabilities approach acting *in situ,* if you will.[63] The present analysis endorses the call for gender equity in the CSDH report by virtue of the fact that gender is a major determinant of stress exposure, personal and social stress-mitigation resources, and social disadvantage. The

[61] Sen 1999, pgs. 51-53, 147-153
[62] CSDH 2008, pg. 161
[63] See Drèze & Sen 1989, Sen 1992b, and Nussbaum 2000

CSDH recommendations to make discrimination on the basis of sex illegal, to increase investment in women's formal and vocational education, and to improve funding of sexual and reproductive health services best promote stress-mitigation resources and limit the social disadvantage associated with being female.

CSDH and Power: Navarro's Critique

Navarro (2009) has argued that while the findings of the CSDH successfully demonstrate the link between social factors and health in a way that is all but irrefutable, the report stops short of identifying the real causal forces at play. Trends in health and global politics, he argues, show that underlying the social determinants of health in both developed and developing nations are a series of power relations between socioeconomic classes.

> It is not *inequalities* that kill, but *those who benefit from the inequalities* that kill. The Commission's studious avoidance of the category of power (class power, as well as gender, race, and national power) and how power is produced and reproduced in political institutions is the greatest weakness of the report. (Navarro 2009, pg. 440, emphasis in original)

Reading the CSDH report in light of Navarro's criticism it is in fact hard to imagine that CSDH was not aware of the important distinction between inequalities and those who benefit in the economic realm. In a short section titled "Contextualizing the Recommendations," for example, the CSDH report recognizes that "Implementing the Commission's recommendations requires changes in the operation of the global economy to prevent market pressures and international commitments from impeding implementation…"[64] This kind of language, along with an explicit call for increased progressive taxation, suggests that the CSDH was well aware of the power relations at play. It seems likely that this language was intended to give the report broader political appeal in order to increase the likelihood that its recommendations be adopted. That is, using the language of class struggle would have likely damaged the repute of the CSDH in the

[64] CSDH 2008, pg. 46; similar language is used on pgs. 18, 28, **31**, 35-38, 42, 120-121, **123**,

eyes of many whose incorporation is vital to the making progress on the social determinants of health. In this project I have endeavored to put the consequences of the social determinants of health in terms of restrictions of freedom that follow consistently from the mechanisms considered here will hopefully politicize the issue in a way that is similarly accessible to a broad range of political dispositions.

Political tractability does not so easily answer Navarro's criticism in terms of other power relations, most obviously that of race.[65] Recall that membership in a minority racial group is a causally significant social characteristic in both the stress process model and CAD theory. Research specifically on the health disparities attributable to this characteristic has shown that these health disparities result both from the fact that race is a significant predictor of one's social environment (including characteristics such as income level, access to healthcare, exposure to toxic hazards, etc.) and from experiences of direct racism.[66] The CSDH's call for the improvement of living conditions generally and greater political inclusion specifically of excluded racial groups may address the social environment associated with race, but they fail to address experiences of racism. In fact, the word "racism" doesn't appear in the CSDH report at all. The closest the report comes to recognizing these causally significant transgressions is to admit that political inclusion has a "cultural component."[67] This omission runs counter to the recommendations of the Social Exclusion Knowledge Network (SEKN), the research body convened by the CSDH to assess the evidence on social exclusion. The final SEKN report to explicitly recommended to "only use the term 'social exclusion' when more precise and

[65] Though it's hard to see his point in terms of gender. Calls for gender equality pervade the CSDH; it's an issue that receives explicit focus and repeated attention.
[66] Again, see Fausto-Sterling 2008; Gee & Payne-Sturges 2004; Geronimus, Hicken, Keene, & Bound 2006; Gravlee 2009; Kaplan 2010; Morello-Frosch et al. 2011; and Pearlin et al. 2005
[67] CSDH 2008, pg. 157

informative descriptors of the phenomena to be targeted, such as food insecurity or racism, are not available."[68]

CSDH's neglect of prejudicial behavior is a glaring omission. The stress process and CAD pathways considered above illustrate that experiences of racism and other prejudicial behavior have significant consequences in terms of capabilities.[69] I therefore recommend that the policies from the CSDH report emphasized above be supplemented by policies that address the issue of prejudicial behavior. These may include policies that create penalties for public employees who engage in prejudicial behavior, inclusivity training for teachers, and a diversity and tolerance curriculum for students.

VII. Conclusion

In this thesis I have endeavored to show that psychosocial stress, perceived resource scarcity, and social disadvantage limit individual freedom as it is understood in the capabilities approach. Furthermore, I have argued that the inequitable and preventable social origins of these capabilities restrictions make them an issue of social justice which requires certain policy interventions. Part of the significance of this project is that it illustrates a way in which recent advancements in assessments of personal well-being can enable the holistic, multi-disciplinary assessments of well-being that the capabilities approach requires. Single-variable assessments of well-being (such as utility or real income) may have been appealing in times in which data availability on many different factors of a person's well-being was low, but improvements in technology, medicine, and psychology have made data so readily available as to make such a constrained perspective simply untenable. Insofar as justice is concerned, at least in part, with the

[68] SEKN 2008, pg. 16
[69] This critique of the CSDH report is not limited to the racialized society of the United States—similar criticisms could be easily lodged against the CSDH report on the basis of, for example, caste in India.

real freedoms that individuals enjoy, we can no longer ignore what this information may tell us about individuals' freedoms in seeking a more just society. I make this point partly to add a sense of urgency to the recommendation that the stress process and cognitive resource models be included in capabilities assessments, but also to advocate for the inclusion of other promising perspectives.[70] This push for inclusivity is consistent with Sen's objective of developing an approach with a rich information base.

Integration of the social determinants of health and the capabilities approach is far from novel. Indeed, the collaboration of Michael Marmot and Amartya Sen suggests these two bodies of literature are not only complementary, but also co-evolved.[71] In this sense the present project does not exactly blaze new trails in political philosophy. But neither is it trivial. As was mentioned in the introduction, taking the argument that the real freedoms individuals enjoy is what matters for justice seriously requires that we do our best to understand not only the factors, but the mechanisms underlying restrictions of this freedom. Accounts such as those of LaVaque-Manty suggest that integration of the social determinants of health and the capabilities approach through the pathways considered here may expose many unequally distributed harms (such as eating disorders) as politically problematic. This project therefore has great relevance for the capabilities approach in both developing and developed countries.

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[70] One such perspective is the epidemiological concept of an "exposome" which would record individuals' disease risk from exposure to environmental hazards in the same way that their genome contains information about their disease risk due to genetic factors. See Wild 2005, Rappaport 2010, and Rappaport 2011 for advocacy of the promise of the exposome concept and Peters, Hoek, and Katsouyanni 2012 for a discussion of its potential limitations

[71] See Sen 2002, Marmot 2005, CSDH 2008 pgs. 26, 34-35. See also Sen's forewords to Daniels, Kennedy and Kawachi 2000, and Farmer 2004 for more of his comments on the social determinants of health

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