Inequality from the bottom up:
Toward a 'psychological shift' model of decision-making under socioeconomic threat

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A full understanding of the negative impact of economic inequality must consider the perspective of those at the bottom of society. This chapter focuses on how the experience of low socioeconomic status shapes decision-making processes. It begins with the assumption that life on a low income in an unequal society involves exposure to resource scarcity, instability, and low subjective social status. It argues that these conditions act as socioecological cues, triggering a 'psychological shift' in the domains of appraisal (lowering perceived personal control), regulation (inducing a focus on the present and on threats), and cognition (tuning cognitive resources toward addressing pressing needs). These psychological shifts, and the resulting decision-making patterns, can be understood as adaptive in the context of socioeconomic threat, even if they have harmful long-term consequences. Developing a systematic understanding of them thus enables us to chart some of the more subtle, yet pervasive, influences of the related societal conditions of poverty and inequality.

Key words: inequality, decision-making, resource scarcity, social status, economic instability, psychology of poverty, personal control, self-regulation, executive functioning

Although popular accounts of the negative social consequences of inequality (see Wilkinson & Pickett, 2009, 2018) highlight its harmful effect on all members of society, there is no doubt that the greatest sufferers are those at the very bottom. Indeed, as the gap in income between the richest and poorest of a country widens, so do these groups become increasingly distant in terms of a range of important life outcomes. For example, the disparity in life expectancy between people falling into the lowest and highest socioeconomic categories is enhanced in more unequal countries (Wilkinson, 1997), just as the difference in educational outcomes between those same groups continues to grow (Reardon, 2013). Conversely, it is those outcomes which already have a socioeconomic gradient (such as physical health and educational achievement) that are found to be most sensitive to the damaging effects of inequality (Wilkinson & Pickett, 2009). If we want to understand the processes underlying the impact of inequality in any one society, therefore, we need to have a mechanistic account of how individual psychology is shaped by one's socioeconomic position within that society.

Such an account is made more urgent by the predominance of claims about the supposed abilities and attitudes of low income groups, found in media, political, and even academic discourse. Public opinion allocates substantial blame for poverty on individual failures (Bullock, Williams, & Limbert, 2003), while there is no shortage of soap operas, reality shows, tabloid newspapers, and political speeches portraying those in receipt of welfare benefits as making little effort to improve their situation (Bullock, Fraser Wyche, & Williams, 2001; MacDonald, Shildrick, & Furlong, 2014; McKendrick, Sinclair, Irwin, O'Donnell, Scott,, & Dobbie, 2008; Paris, 2008; see also Augoustinos & Callaghan, Chapter XX; Fiske & Durante, Chapter XX).

Meanwhile, scholars from across the social sciences report on decision-making patterns exhibited to a greater extent by those low in socioeconomic status (SES), which are observed to exacerbate their poor socioeconomic position (for reviews, see Bertrand, Mullainathan, & Shafir, 2004; Pepper & Nettle, 2017; Sidanius & Pratto, 1999). It has been reported, for example, that the lower one is in SES, the more likely one is to engage in unhealthy behaviours such as smoking (Pampel, Krueger, & Denney, 2010; Stringhini et al., 2010), even where such behaviours cost money. Those living on very low incomes (compared to those on middle incomes) often spend a greater proportion of their income on luxury goods or servicing high interest loans (Bertrand et al., 2004; see also Brown-Iannuzzi & McKee, Chapter XX), actions that can act to cement a situation of financial strain or indebtedness. At the same time, the poorest groups in societies such as the United States are said to be less likely to behave in ways that enhance their long-term well-being, such as investing effort in education (Ready, 2010; Walpole, 2003) and taking out insurance or savings accounts (Bertrand et al., 2004). The resulting portrait of those living in relative poverty in rich, unequal countries is of a puzzling tendency to make decisions that further entrench their position at the bottom of society.

In order to narrow the gap in outcomes between the winners and losers of inequality and to understand the behaviours that may contribute to it, we need to take seriously the perspective of those at the bottom of society. This chapter does so by considering the specific ways in which the experience of life on a low income shapes one's decision-making processes, focusing on three different aspects of the socioecological context of poverty. As summarised in Figure 1, the 'psychological shift' model of decision-making under socioeconomic threat (see also Sheehy-Skeffington, 2018, 2019; Sheehy-Skeffington & Haushofer, 2014) outlines how psychological processes respond to environmental cues triggered by the experience of resource scarcity, instability, and low subjective social status. Used as an organising framework for findings from multiple disciplines on the link between low socioeconomic status (SES) and decision-making, this model enables behaviours claimed to be suboptimal to be seen as not only understandable, but adaptive in socioecological context (Sheehy-Skeffington, 2018, 2019; Sheehy-Skeffington & Rea, 2017). It thus sheds light on one of the more subtle mechanisms through which widening income disparities might harm the well-being of those at the bottom of society, showing how they shape life outcomes not only directly, but also indirectly, through decisions which may end up entrenching inequality even further.

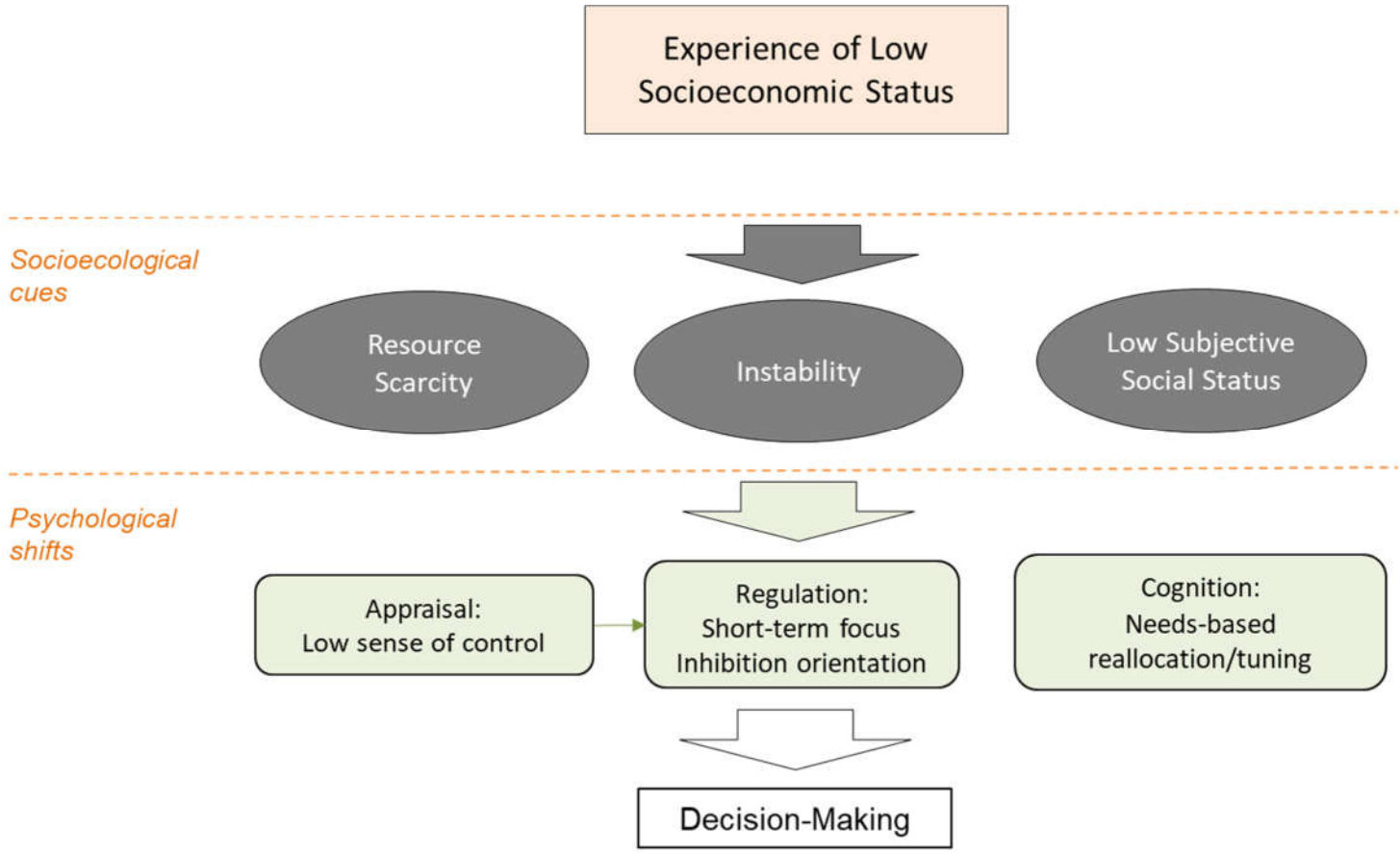

Figure 1: Outline of the 'psychological shift' model of decision-making under socioeconomic threat.

The psychological impact of resource scarcity

Following the financial crisis of 2007-8, austerity-driven cuts in public support and unevenness in economic recovery have ensured absolute poverty persists as a core characteristic of economic inequality in the industrialised world (see e.g., Barnard, 2018). Thus, the first challenge of being at the bottom of a highly unequal society is likely that of making basic ends meet. As one needs money for everything, from putting food on the table to travelling to work and socialising with friends, having little money means having few options for what one can and cannot do.

As first highlighted by researchers in public health, a key psychological consequence of being constrained in what one can do is low sense of control: a form of appraisal that one is unable to influence one's life outcomes (Lachman & Weaver, 1998; Seeman, 2008). Sense of personal control, often talked about as generalised self-efficacy (Bandura, 1977, 1997), is an important predictor of positive health behaviours, leading public health

researchers to posit it as a key psychosocial mediator of the impact of low socioeconomic status (SES) on health outcomes (Adler & Rehkopf, 2008; Seeman, 2008).

But there is more to perceived control than self-efficacy. In order to appreciate how deeply the material context shapes decision-making processes, we need to consider not only whether one can carry out a desired behaviour, but also whether one's behaviour will be effective in achieving a desired life outcome. The latter appraisal has been referred to as response efficacy or outcome expectations (see Skinner, 1996), and is linked to locus of control (Rotter, 1966). If one attends a school with very poor teaching and no science facilities, no amount of self-efficacy in terms of sitting down to study will enable one to qualify to study medicine, as one's educational outcome is not determined primarily by one's education-related behaviours. Indeed, there is evidence that perceiving one has more control than one actually does, that is, overestimating one's response efficacy, can have negative health and performance consequences (Thompson, Cheek, & Grahma, 1988; see also Pittman & Pittman, 1979). Thus, the relatively low sense of control reported by those low in SES may be understood as a rational reappraisal of one's ability to effect life changes in response to real constraints. To the extent that rising economic inequality makes the life outcomes of the most successful in society seem ever further out of reach, it will exacerbate this low sense of control among those struggling to makes ends meet on a daily basis.

The influence of resource scarcity on these kinds of control appraisals has knock on consequences for processes of self-regulation. Experiments have demonstrated that exposure to cues of resource scarcity or related stress apparently diminishes self-regulation, by increasing the extent to which one will value an immediate over a delayed reward (Haushofer & Fehr, 2014; Liu, Fengh, Suo, Lee, & Li, 2012). Linking this form of present bias with sense of control, Gillian Pepper and Daniel Nettle (see Pepper & Nettle, 2017; Pepper & Nettle, 2014a) highlight the fact that living in deprived contexts often means being exposed to greater risk of early death from environmental forces such as violence, hard manual labour, and toxins. According to this account, deprivation cues high extrinsic morality risk—the likelihood that one will die for reasons outside of one's control (see also Nettle, 2010a; Pepper & Nettle, 2014b)—thus, highly impoverished response efficacy. This reduces the payoff available from investing energy in long-term outcomes, thus making it more adaptive to focus this limited energy on the short term (see Nettle, 2010b). This shift in energy investment is core to understanding what Pepper and Nettle call the 'behavioural constellation of deprivation'—that set of behaviours associated with low socioeconomic groups which seem to harm their long-term outcomes—casting them as responses to ecological cues, which are adaptive in an ultimate sense (Pepper & Nettle, 2017). In social psychological terms, what might appear as irrationally myopic decisions, driven by enduring traits such as inability to delay gratification (Mischel, 1974; 2014; Mischel, Shoda, & Rodriguez, 1989) or discounting of future rewards (Kirby & Marakovic, 1996) are in fact the product of a rational regulatory shift from the long to the short term (see Fujita, 2011), in response to the reality of the experience of poverty. As suggested in Figure 1, socioeconomic disparities in personal control and long-term focus would thus not be deficiencies of low SES groups, but a case of a reappraisal of the actual impact of behaviour on life outcomes, and temporal adjustment of priorities as a result.

Whereas sense of control and short-term focus relate to the domains of self-appraisal and self-regulation, respectively, the third set of decision-making mechanisms influenced by resource scarcity sit in the cognitive domain. In the field of behavioural economics, Sendhil Mullainathan, Eldar Shafir, and collaborators have charted how being short on money is similar to being short on time or any other kind of resource: it is a situation of scarcity, which has a predictable cognitive impact on anyone experiencing it. First, scarcity leads the mind to 'tunnel' on the resource in question, such that a hungry person finds it hard to get food out of mind (Keys, Brožek, Henschel, Mickelsen, & Taylor, 1950), just as a poor person finds it hard to keep money out of mind (Shah, Zhao, Mullainathan, & Shafir, 2018). Second, such a narrowing of focus is said to take up limited 'mental bandwith', leaving one too cognitively overloaded to focus on other important aspects of decision-making, and on the downstream consequences of one's decisions (Mullainathan & Shafir, 2013). Studies in this research stream have shown how middle income participants, when given temporary exposure to the experience of resource scarcity in an online game, behave in similar ways to those actually experiencing poverty, borrowing resources from future rounds to the detriment of later game outcomes (Shah, Mullainathan, & Shafir, 2012). The claim is that here, short-termism is caused not by regulatory adjustment, but by mental disruption—disruption which prevents one from engaging the core cognitive processes of executive

functioning, and even leads one to perform worse in intelligence tests than when one is not preoccupied with financial concerns (Mani, Mullainathan, Shafir, & Zhao, 2013).

Such behavioural economics research contributes to a picture of seemingly suboptimal behaviours as the product of the damaging cognitive impact of resource scarcity and the pressures that brings. What is less fully articulated from this perspective is how such responses might not only be understandable, but optimal and rational, when considered in context, just as shifts in personal control and self-regulation are adaptive responses to difficult ecological conditions. Rather than assume the impact of resource scarcity is a case of cognitive disruption, one could look at the specific nature of cognitive processing under conditions of scarcity to see whether it, too, might involve an adaptive shifting of focus (Sheehy-Skeffington & Rea, 2017; see also Frankenhuis & de Weerth, 2013). With Michael Price, Nicholas Pound and Isabel Scott, I have started looking at this in the case of food scarcity (Sheehy-Skeffington, Price, Scott, & Pound, 2019). We administered cognitive tests to participants who had been fasting for 12 hours, half of whom were randomly assigned to eat breakfast (the other half remaining hungry). Preliminary results using this experimental design suggest that the established finding of a damaging effect of hunger on cognitive performance goes away, and possibly flips in direction, when participants are engaged in cognitive tasks involving food stimuli. This implies that cognitive resources have not been disrupted or depleted by the experience of resource scarcity, but have shifted in focus toward addressing the pressing need (see also Kurzban, Duckworth, Kable, & Myers, 2013). They thus contribute to the emerging picture of the experience of low socioeconomic status inducing a 'psychological shift' in response to socioecological cues.

The psychological impact of instability

Living in poverty is more than just living in need. Invariably, it also involves living in an *unstable* situation, in which there are frequent changes in circumstances such as one's earnings, whether one will have enough food for one's family, and perhaps even where one sleeps. Instability is recognised as a key component of life in low income contexts (Gad & Johnson, 1980; Evans, 2004), and its importance is enhanced in more unequal societies, where the lowest paid jobs are increasingly precarious in terms of guaranteed hours and income (Standing, 2011). The question then arises as to whether the instability brought about by relative poverty leads to the same pattern of shifts in the three psychological processes outlined above as does scarcity. Certainly, we know from classic studies on control deprivation (e.g., Pittman & Pittman, 1979) that being unable to predict the impact of one's actions in a game triggers a low sense of control. Economists have recently shown how economic instability, defined as unavoidable downside risks such as a sudden loss of income, can lead to increases in obesity in affected families, controlling for overall income (Kong, Osberg, & Zhou, 2018; Rohde, Tang, Osberg, & Rao, 2017; Watson, Osberg, & Phipps, 2016; see also Claassen, Corneille & Klein, Chapter XX). Given the central role of control in enabling healthy behaviours (Davis et al., 2007; Fisher et al., 2011), it is possible that the impact of this form of financial instability on health outcomes is mediated by shifts in psychological processes affecting decision-making. That is, the experience, or anticipation, of an unpredictable loss of income may decrease one's sense of control, and with it, one's long-term focus, and this psychological shift may be what drives up unhealthy eating behaviours.

Moving from control appraisal to self-regulation, an emerging strand of evolutionary developmental research looking at the impact of adverse conditions in childhood on later life decision-making gives a prominent role to instability as an ecological cue. Researchers in this tradition adopt the biological perspective of the life history theory, which posits that humans, as with other animals, draw on cues concerning the difficulty of their environmental conditions while they are very young (used as a predictor for conditions later), in developing cognitive and regulatory strategies (Ellis, Figueredo, Brumbach, & Schlomer, 2009; Roff, 1992; Stearns, 1992). Studies in this vein have shown how those who grow up in environments that are harsh and unpredictable are more likely, when presented with an experimental treatment that increases their current sense of economic threat (assumed to mimic this childhood environment), to behave more impulsively (Griskevicius et al., 2013; though see Pepper et al., 2017). This shift in focus is the central feature of adopting a 'fast' life history strategy—a behavioural repertoire claimed to be seen across animal species, in which organisms invest their limited energy in achieving early gains to inclusive fitness, usually through having many offspring when young, as opposed to investing more in fewer offspring over a longer lifespan. Present-biased behaviours in adulthood, seen from this perspective, are not failures of an innate ability to resist impulses, but signatures of an overall regulatory shift toward the present that is an adaptive response to extreme ecological conditions.

Insights on the regulatory impact of exposure to unpredictability when young are in line with emerging studies of unpredictability experienced in adulthood. This work has again challenged a purely trait-based notion of willpower, as inferred from the classic studies of Walter Mischel, in which academic and other outcomes are predicted by whether a person, when young, could resist the impulse of eating one marshmallow in order to receive the reward of a second marshmallow at an unspecified later time (see Mischel, 1974, 2014). Celeste Kidd and collaborators (Kidd, Palmieri, & Aslin, 2013) created a variation of the marshmallow task in which children were assigned, first, to learn that the environment they were in was either stable (and thus, reliable) or unstable (and thus, unreliable). Those in the reliable condition waited almost four times as long, on average, as those in the unreliable condition, without eating the tempting marshmallow (Kidd et al., 2013). This result implies that a perceived failure of impulse control, as observed in lower income children from Mischel's studies, might in fact be the product of an implicit decision to prioritise a short-term over long-term reward (see also Fujita, 2011), in a manner that is rationally responsive to the instability, and thus unpredictability, of the surrounding context (see also Daly & Wilson, 2005; Pepper & Nettle, 2017; Wilson & Daly, 2004).

In the case of cognitive functioning, the impact of early life instability is also moving toward recognition of the adaptiveness of the behavioural responses exhibited by those from deprived contexts. Bruce Ellis, Willem Frankenhuis, and others (Ellis, Bianchi, Griskevicius, & Frankenhuis, 2017; see also Frankenhuis & De Weerth, 2013; Frankenhuis, Panchanathan, & Nettle, 2016) have put forward a model of resilience based on life history theory principles, which focuses on the cognitive strengths exhibited by those who have grown up in adverse contexts, the latter defined as involving hardship and unpredictability. Complementing the established body of work on the damaging cognitive impact of childhood deprivation (Bradley & Corwyn, 2002; Conger & Donellan, 2007; Duncan, Magnuson, Kalil, & Ziol-Guest, 2012), this work explores its adaptive impact. It begins by considering which cognitive skills are most needed in situations of harshness or unpredictability, and thus might be stronger among those who have grown up in such situations, than in those from less stressful backgrounds (see Ellis et al., 2017). In the case of those growing up in instability, one set of studies found that people with such a background (as compared to those with no exposure to childhood instability) who were presented with information regarding economic uncertainty exhibited worse performance on measures of the executive function of inhibitory control (related to impulsivity, and thus in line with the above findings), but *better* performance on measures of cognitive flexibility (specifically, shifting – see Mittal, Griskevicius, Simpson, Sung, & Young, 2015; see also Vandenbroucke et al., 2015). Another set of studies looked at different facets of working memory, finding that those who grew up in unpredictable environments, when primed with uncertainty, had worse working memory capacity and retrieval, but *better* working memory updating, compared to those who grew up in predictable environments (Young, Griskevicius, Simpson, Waters, & Mittal, 2018).

In sum, there is evidence to support the claim that the instability that is increasingly a feature of life at the bottom of unequal societies, and the resultant unpredictability of life circumstances, influences psychological processes in a similar manner to resource scarcity. Experiencing unpredictable change, whether in income, employment, working hours, living conditions, school, or relationships, especially in a critical period of youth, seems to lead to the development of regulatory and cognitive strategies which can be triggered by situations of uncertainty later in life, and are possibly well adapted to such situations, even if they have damaging long-term outcomes. Though not studied directly, these shifts are likely mediated by an implicit or explicit sense that an unpredictable world is one over which one has little control, and thus which requires a different set of psychological responses than would a world full of people and events on which one can reliably depend.

The psychological impact of low subjective social status

Looking at the psychological impact of scarcity and instability goes some way to situating the observation of suboptimal behaviours associated with low income groups in the wider context of material needs and ecological constraints (see also Üskül & Oishi, 2018). The truly *social* nature of this wider context becomes clear, however, in the case of my proposed third key component of the psychological situation of poverty: that of low subjective social status (see Sheehy-Skeffington & Haushofer, 2014; Sheehy-Skeffington, 2016; 2018, 2019). In a rich society, poverty is not just having little, but having less than others, and the more unequal the society, the more salient relative comparisons become (Cheung & Lucas, 2016). To the extent that being poor means feeling low in a society's hierarchy, the salience of *feeling* poor will increase as the hierarchy becomes ever more steep (see also Wilkinson & Pickett, 2009).

An analysis of socioeconomic status in terms of relative standing is a central perspective in the cultural psychology of social class. In this strand of research, Michael Kraus and collaborators (Kraus, Piff, & Keltner, 2011; Kraus, Tan & Tannenbaum, 2013) have characterised the experience of low social class in terms of the perception that one is relatively low on the 'ladder of society' (see Adler, Epel, Castellazzo, & Ickovics, 2000; Goodman et al., 2001). Given the centrality of perceptions of social rank in human and primate evolutionary history (Cummins, 2005; Sapolsky, 2004), it is no surprise that humans are very sensitive to where they sit in social hierarchies, and adjust their perceptual, regulatory and cognitive processes as a result (Anderson, Hildreth, & Howland, 2015; Keltner, Gruenfeld, & Anderson, 2003; see also Scheepers & Ellemers, Chapter XX). The question then turns to whether the decision-making processes associated with life in low income contexts can be understood in part as responsive, and perhaps even adaptive, to the context of low subjective social status.

The answer is straightforward when it comes to sense of control. Consistent with the fact that being low in any hierarchy is synonymous to having little relative power (Magee & Galinsky, 2008), being low in the socioeconomic hierarchy is reliably linked to self-reporting low levels of power and control over one's life outcomes (Bobak, Pikhart, Rose, Hertzman, & Marmot, 2000; Keltner et al., 2003; Piff, Kraus, Côté, Cheng, & Keltner, 2010). Indeed, this feeling of low relative power is critically adaptive for any animal who finds him or herself at the bottom of a dominance hierarchy, in that it enables the avoidance of costly fights (e.g., Dawkins, 1976). Against the possibility that the link between SES and sense of control is due solely to low self-efficacy (or related traits) limiting socioeconomic achievement, experiments have demonstrated that exposure to perceptions that one is relatively low in SES (regardless of one's actual income) decreases sense of control, an effect that is mediated by lower self-reported power and dominance (Sheehy-Skeffington & Sidanius, 2015).

Moving from appraisal to regulatory processes, the literature on the psychology of social power leads us to expect that the lower perceived rank that comes with the salience of relative poverty should decrease approach orientation and increase inhibition orientation, thereby making one more focused on threats and neglectful of rewards and goals (see Keltner et al., 2003). Indeed, a systematic review of recent studies on poverty and decision-making processes revealed a positive association between socioeconomic status and the adoption of a mindset conducive to long-term goal completion, as measured through aspirations and motivation to achieve in a number of domains (Sheehy-Skeffington & Rea, 2017). When it comes to the privileging of short-term over long-term goals, to the extent that this is a rational response to low control (see above), it should become more likely as low relative income is made salient. Though the link between subjective socioeconomic status and present-bias has not been tested directly, there is some evidence that feeling low in a social hierarchy increases discounting of the future (Joshi & Fast, 2013; though see Zhang & Smith, 2018).

Turning to the cognitive domain, I have recently used an experimental approach to explore the relationship between low subjective socioeconomic status and executive functioning. Inspired by separate observations of the negative cognitive impact of resource scarcity (Mani et al., 2013) and low sense of power (Smith, Jostmann, Galinsky, & Van Dijk, 2008), I set out to test whether the perception of low relative socioeconomic status could disrupt executive functioning. In three studies run with diverse samples, Jim Sidanius and I found that it did: those randomly assigned to believe that they were relatively low on the societal socioeconomic ladder performed worse than those believing they were relatively high in SES on measures of inhibitory control, planning, and updating. A fourth study implied this impaired cognitive functioning damaged performance in a financial decision-making task (Sheehy-Skeffington & Sidanius, 2014).

More recent work digs deeper, asking whether this is indeed a case of cognitive deficit, or, rather, as implied by the current model, sign of a shift in cognitive resources toward addressing a pressing need. Michael Price and I designed a study in which we varied perceptions of relative socioeconomic standing, and also the perceived relevance of the cognitive tasks that followed, the latter by presenting information on the real world correlates of executive functioning performance. Results suggest that as long as cognitive tasks are presented in standard, status-irrelevant ways (i.e. by linking executive functioning and prefrontal brain activity), they elicit worse performance from those feeling relatively socioeconomically deprived, as I had previously found. Once the cognitive task is presented as relevant to potential status gains (by linking executive functioning and later socioeconomic achievement), however, this performance difference across the subjective SES conditions seems to go away, and may even flip in the opposite direction (Sheehy-Skeffington, Sidanius, & Price, 2016). As with the above work on the cognitive impact of resource scarcity (Sheehy-Skeffington et al., 2019), this set of

findings implies that threats associated with low SES, in this case concerning status, lead to a shift in focus of cognitive processes, as opposed to a form of mental 'shut down' induced by cognitive load.

Research taking this more nuanced perspective on the psychological impact of low subjective social status can also shed light on more general observations of seemingly suboptimal behaviours associated with those living in or near poverty, such as spending a significant proportion of one's income on cigarettes, illegal activities (such as drug-taking or knife-carrying), or conspicuous consumption (Agnew, Matthews, Bucher, Welcher, & Keyes, 2008; Banerjee & Duflo, 2007; Sidanius & Pratto, 1999). Rather than dismiss such behavioural patterns as the product of either deficient decision-making abilities, or even contextually-disrupted decision-making processes, they might be understood as resulting from a shift in psychological focus toward addressing a threat arising from the socioecological context—in this case, a threat to social status. To the extent that inequality increases the association between poverty and low subjective status, spending to serve status goals in local contexts is an ecologically rational decision, regardless of its damaging long-term consequences. Social and consumer psychology research has shown that consumption and display of status goods increases as low status is made salient, supportive of this rational compensatory account (Carr & Vignoles, 2011; Rucker & Galinsky, 2008; 2009; Sivanathan & Pettit, 2010; Walasek & Brown, Chapter XX; though see Karlsson, Gärling, Dellgran, & Klingander, 2005; Zhao, Jin, Song, Cui, & Ding, 2018).

Summary and outstanding questions: Socioeconomic threat as a trigger of psychological shifts

Returning to Figure 1, the model presented here proposes the three most psychologically salient aspects of being poor in a rich, unequal country, and the ways in which they may trigger shifts in psychological processes in three key domains. This framework (see also Sheehy-Skeffington & Haushofer, 2014; Sheehy-Skeffington, 2018, 2019; Sheehy-Skeffington & Rea, 2017) attempts to take the perspective of those experiencing poverty in both an absolute and a relative sense, by considering the ways environmental constraints change one's decision-making context. I suggest they do so by creating a psychological situation involving the salience of (1) the scarcity of much-needed resources, (2) the instability of resource supply and consequent unpredictability of life circumstances, and (3) the position of being very low in the status hierarchy of one's society. These contextual cues are socioecological in nature (see Üskül & Oishi, 2018), and are experienced as a set of threats that need to be immediately addressed. I argue that they trigger a shift in psychological processes to address these threats, in a way that optimises the use of limited energy reserves in the moment, and, possibly, across the lifespan. First, one's appraisal of the extent to which one can control one's life outcomes is lowered. Second, and linked to this diminished sense of control, one's regulatory focus shifts from long-term to short-term goals, and from rewards to threats. Third, one's cognitive resources become focused on processes (such as shifting), tasks (such as those linked to potential status gains), and stimuli (such as money and food) that address pressing needs.

These shifts in psychological processes go at least some way toward explaining what at first seem to be damaging decision-making patterns associated with those living at the bottom of unequal societies. By understanding their mechanistic underpinnings and proximal goals, we can appreciate the functional and adaptive and nature of many of these decisions. The result will be an understanding of decision-making under socioeconomic threat which does justice to the resilience and resourcefulness of those in or close to poverty. Such an understanding is needed now more than ever, as a growing economic distance between the social classes brings with it a growing psychological distance. Indeed, the association between increases in income inequality and decreases in societal solidarity (Paskov & Dewilde, 2012) may in part be due to the way in which inequality creates a divergence in experiences and behaviours across the socioeconomic gradient. Bridge this socioeconomic empathy gap may thus help engender support for interventions at multiple levels (Sheehy-Skeffington & Rea, 2017; see also Ellis et al., 2017). Such interventions might include increasing the actual control people have over their life outcomes, strengthening the social safety net in a way that increases the predictability of life at the bottom of society, and making academic tasks more relevant to the threats faced by students from relatively deprived neighbourhoods. More broadly, this approach adds further weight to calls to reduce both poverty and inequality, and to consider each in light of the other.

There are a number of questions which need to be addressed in developing this into a comprehensive account of decision-making under socioeconomic threat. One concerns the relative importance of the three components of the psychological situation of poverty, and how this might change over ontogenetic and historical time. Life history theory leads us to expect that cues of scarcity and instability have the greatest impact on regulatory strategies when experienced at birth and early childhood (Ellis et al., 2009), while developmental psychology research highlights the importance of status concerns in adolescence and early adulthood (Brown & Lohr,

1987; Goodman et al., 2001). The importance of scarcity, at least in terms of basics such as food and shelter, likely decreases as a country's level of economic development increases (Ravallion, 2001), though one would expect important cross-nation differences in this relationship depending on the strength of social protections for those at the bottom of society—the safety net which we know is endangered by increasing inequality (Paskov & Dewilde, 2012). Such social protections, when they take the form of a guaranteed income, housing or healthcare, likely reduce the salience of instability among low income populations, but compete against a trend toward casualization in low-paid work (Standing, 2011), entailing unpredictable incomes, which will increase instability for those at the bottom.

When it comes to status concerns, there is reason to believe that the salience of relative socioeconomic standing varies with over-time and cross-national differences in economic inequality, the central theme of this volume (see Cheung & Lucas, 2016). In building up an empirical case for the impact of inequality on status-related concerns (see Wilkinson & Pickett, 2017, 2018), it will be important to demonstrate changes not only across countries, but over time, including checking whether decreases in inequality are followed by a reduction in status anxiety (see Vilhjalmsdottir, De Clercq, Gardarsdottir, Bernburg, & Sigfusdottir, 2018). It is also critical to clarify the level at which inequality is proposed to have its greatest impact, which, when focusing on status anxiety as a mediating mechanism, should depend on the most salient reference group for socioeconomic comparisons. Wilkinson and Pickett (2009) claim state- or nation- level inequality are more socially corrosive than inequality at the neighbourhood-level, while at the same time drawing on theories of evolved sensitivity to status hierarchies (e.g., Sapolsky, 2004) that are rooted in local comparisons. Research on income, inequality, and subjective well-being seems to lean toward the importance of the local level of comparison (Anderson, Kraus, Galinsky, Keltner, 2012; Kudrna, 2018; Senik, 2009; Sheehy-Skeffington, Kteily, & Hauser, 2016). However, associations between income and satisfaction have been observed when comparisons are made at multiple levels, including with the previous generation in one's family (Dolan & Lordan, 2013; Hadjar & Samuel, 2015), one's neighbours (Luttmer, 2005), one's colleagues (Anderson et al., 2012; Card, Mas, Moretti, Saez, 2012; Clark & Senik, 2010), one's occupational group (Bygren, 2004; Dornstein, 1988), one's peers (Anderson et al., 2012; Callan, Kim, & Matthews, 2015; Kudrna, 2018; Pérez-Asenjo, 2011), and society at large (Kurdna, 2018; Sheehy-Skeffington et al., 2016a).

Another unresolved issue concerns the interrelationships between the appraisal, regulatory and cognitive processes proposed to shift in response to the psychological situation of poverty. The above model includes an arrow to represent the influence of control appraisals on self-regulation, but it is possible that cognitive processes are also affecting, and/or affected by appraisal and regulatory processes. One intriguing possibility is that the psychological shifts are part of a more global alteration in information-processing style, such as construal level—the extent to which one is processing information abstractly (focusing, for example, on *why* certain behaviours are being performed) or concretely (focusing on *how* behaviours are performed; see Vallacher & Wegner, 1987). According to construal level theory, one engages in concrete (or low construal) information processing when focused on stimuli that are proximal on four correlated dimensions of psychological distance: the temporal, the spatial, the social, and the existential (Trope & Liberman, 2010). Sheehy-Skeffington and Haushofer (2014; see also Sheehy-Skeffington, 2019) bring this social psychology theory to the study of poverty and decision-making, suggesting the possibility that poverty might lead to a lowering of construal level and a resultant constriction of focus toward the 'here and now'. Integrating this idea into the above model would imply that resource scarcity, instability, and low social status trigger a shift in focus not only toward the present (and away from the future), but also toward the local (and away from the distant), toward those socially close (and away from those socially distant), and toward the actual (and away from the hypothetical). In their review of recent evidence on poverty and decision-making processes, Sheehy-Skeffington and Rea (2017) found the notion of shifts in psychological distance to account well for the impact of poverty not only on cognition and self-regulation, but also on social interaction. The framework of construal level and psychological distance offers a unifying language with which to articulate the functionality of behaviours in a proximal sense, alongside their possibly harmful distal impact (Sheehy-Skeffington & Rea, 2017). Studies in my lab are currently testing the proposed link between low SES and psychological distance directly, to assess the viability of this claim (see, e.g., Sheehy-Skeffington, Price, Havmose, Scott, & Pound, 2017).

Finally, although a consideration of subjective status goes some way toward highlighting the role of social psychological processes in mediating the experience of poverty, there is more to be done to situate poverty in its wider societal context. For example, the importance of nation-level inequality for decision-making and life outcomes entails consideration of how low socioeconomic status is experienced not as an interpersonal, but as an intergroup phenomenon (see Croizet & Claire, 1998; Easterbrook, Hadden, & Nieuwenhuis, chapter xx; Manstead, 2018). Developing a more nuanced understanding of the underlying mechanisms of behaviour in

unequal contexts should also proceed alongside consideration of how individual psychological processes are coloured by cultural understandings of the self, which vary with social class as well as across countries (see Stephens & Townsend, 2013).

Conclusion

Concerns about economic inequality are often pitched in opposition to concerns about poverty. Social commentators (e.g., Bourne & Snowdon, 2016; see Bucelli, 2017) have argued that instead of trying to regulate the spread of income or wealth across the socioeconomic spectrum, we should instead be worried only about helping those at the bottom. From a social psychological perspective, however, one cannot understand poverty without considering it in the context of inequality. Supported by an overview of emerging research on the psychological consequences of low socioeconomic status, this chapter has proposed a framework for understanding decision-making in contexts of relative poverty in terms of rational psychological responses to socioecological cues. To the extent that inequality exacerbates the salience of such cues, it will increase the incidence of decisions which may make sense in the context of poverty, but are ill-fitted for a society increasingly alienated from its own poor. Just as efforts to tackle poverty cannot omit the impact of inequality, so efforts to reduce inequality must come hand-in-hand with an understanding of the perspectives of those suffering its worst consequences.

References

Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social class with psychological functioning: Preliminary data in healthy White women. *Health Psychology, 19*, 586– 592.

Adler, N. E. and Rehkopf, D. H. (2008). U.S. disparities in health: descriptions, causes, and mechanisms. *Annual Review of Public Health, 29*, 235–252.

Agnew, R., Matthews, S. K., Bucher, J., Welcher, A. N., & Keyes, C. (2008). Socioeconomic status, economic problems, and delinquency. *Youth & Society, 40*(2), 159-181.

Anderson, C., Hildreth, J. A. D., & Howland, L. (2015). Is the desire for status a fundamental human motive? A review of the empirical literature. *Psychological Bulletin*, *141*(3), 574.

Anderson, C., Kraus, M. W., Galinsky, A. D., & Keltner, D. (2012). The local-ladder effect: Social status and subjective well-being. *Psychological Science, 23*(7), 764-771.

Bandura, A. (1977). Self-efficacy: Toward a unified theory of behavioural change. *Psychological Review, 84*, 191-215.

Bandura, A. (1997). *Self-efficacy in changing societies.* Cambridge: Cambridge University Press.

Banerjee, A., & Duflo, E. (2007). The economic lives of the poor*. Journal of Economic Perspectives, 21*, 141–167.

Barnard, H. (2018). UK Poverty 2018. York: Joseph Rowntree Foundation. Retrieved from: https://www.jrf.org.uk/report/uk-poverty-2018Belsky, J., Schlomer, G. L., & Ellis, B. J. (2012). Beyond cumulative risk: Distinguishing harshness and unpredictability as determinants of parenting and early life history strategy. *Developmental Psychology*, *48*, 662–673. doi: 10.1037/ a0024454

Bertrand, M., Mullainathan, S., & Shafir, E. (2004). A behavioural economics view of poverty. *American Economic Review, 94*(2), 419–23.

Bobak, M., Pikhart, H., Rose, R., Hertzman, C., & Marmot, M. (2000). Socioeconomic factors, material inequalities, and perceived control in self-rated health:Ccross sectional data from seven post-communist countries. Social *Science & Medicine, 51*, 343-350. doi: 10.1016/S0277-9536(00)00096-4

Bourne, R., & Snowdon, C. (2016). *Never mind the gap: Why we shouldn't worry about inequality*. IEA Discussion Paper No. 70. Retrieved from: https://iea.org.uk/wp-content/uploads/2016/09/Never-Mind-the-Gap-Why-we-shouldnt-worry-about-inequality-1.pdf

Bradley, R. H., & Corwyn, R. F. (2002). Socioeconomic status and child development. *Annual Review of Psychology, 53*, 371–399. doi:10.1146/annurev.psych.53.100901.135233.

Brown, B. B., & Lohr, M. J. (1987). Peer-group affiliation and adolescent self-esteem: An integration of ego-identity and symbolic-interaction theories. *Journal of Personality and Social Psychology, 52*(1), 47.

Bucelli, I. (2017). *Inequality, poverty and the grounds of our normative concerns*. Centre for Analysis of Social Exclusion Working Paper 204, London School of Economics and Political Science. Retrieved from: http://sticerd.lse.ac.uk/dps/case/cp/casepaper204.pdf

Bullock, H. E., Fraser Wyche, K. and Williams, W. R. (2001). Media images of the poor. *Journal of Social Issues, 57*(2), pp. 229–46.

Bullock, H. E., Williams, W. R. and Limbert, W. M. (2003). Predicting support for welfare policies: the impact of attributions and beliefs about inequality. *Journal of Poverty, 7*(3), pp. 35–56

Bygren, M. (2004). Pay reference standards and pay satisfaction: what do workers evaluate their pay against?. *Social Science Research, 33*(2), 206-224.

Callan, M. J., Kim, H., & Matthews, W. J. (2015). Predicting self-rated mental and physical health: The contributions of subjective socioeconomic status and personal relative deprivation. *Frontiers in psychology*, *6*(1415),1-14.

Card, D., Mas, A., Moretti, E., & Saez, E. (2012). Inequality at work: The effect of peer salaries on job satisfaction. *American Economic Review*, *102*(6), 2981-3003.

Carr, H. L., & Vignoles, V. L. (2011). Keeping up with the Joneses: Status projection as symbolic self-completion. *European Journal of Social Psychology, 41*(4), 518-527.

Cheung, F., & Lucas, R. E. (2016). Income inequality is associated with stronger social comparison effects: The effect of relative income on life satisfaction. *Journal of Personality and Social Psychology, 110*(2), 332.

Clark, A. E., & Senik, C. (2010). Who compares to whom? The anatomy of income comparisons in Europe. *The Economic Journal, 120*(544), 573-594.

Conger, R. D., & Donnellan, M. B. (2007). An interactionist perspective on the socioeconomic context of human development. *Annual Review of Psychology, 58*, 175–199. doi:10.1146/annurev.psych.58.110405.085551

Croizet, J. C., & Claire, T. (1998). Extending the concept of stereotype threat to social class: The intellectual underperformance of students from low socioeconomic backgrounds. *Personality and Social Psychology Bulletin, 24*(6), 588-594.

Cummins, D. (2005). Dominance, Status, and Social Hierarchies. In Buss, D. (Ed*) Handbook of Evolutionary Psychology*. New Jersey: John Wiley & Sons.

Daly, M., & Wilson, M. (2005). Carpe diem: Adaptation and devaluing the future. *The Quarterly Review of Biology, 80*(1), 55-60.

Davis, C., Patte, K., Levitan, R., Reid, C., Tweed, S., & Curtis, C. (2007). From motivation to behaviour: a model of reward sensitivity, overeating, and food preferences in the risk profile for obesity. *Appetite, 48*(1), 12-19.

Dawkins, R. (1976). Hierarchical organisation: A candidate principle for ethology. In P. P. G. Bateson & R. A. Hinde, Eds, *Growing Points in Ethology*. Cambridge, UK: Cambridge University Press.

Dolan, P., & Lordan, G. (2013). Moving Up and Sliding Down: An Empirical Assessment of the Effect of Social Mobility on Subjective Wellbeing'. CEP Discussion Paper dp1190. http://ideas.repec.org/p/cep/cepdps/dp1190.html.

Dornstein, M. (1988). Wage reference groups and their determinants: A study of blue-collar and white-collar employees in Israel. *Journal of Occupational and Organizational Psychology, 61*(3), 221-235.

Duncan, G. J., Magnuson, K., Kalil, A., & Ziol-Guest, K. (2012). The importance of early childhood poverty. *Social Indicators Research, 108*, 87–98. doi:10.1007/s11205-011-9867-9.

Ellis, B. J., Bianchi, J., Griskevicius, V., & Frankenhuis, W. E. (2017). Beyond risk and protective factors: An adaptation-based approach to resilience. *Perspectives on Psychological Science*, *12*(4), 561-587.

Ellis B. J., Figueredo, A. J., Brumbach, B. H., & Schlomer, G. L. (2009). Fundamental dimensions of environmental risk: the impact of harsh versus unpredictable environments on the evolution and development of life history strategies. *Human Nature*, 20, 204-268.

Evans, G. W. (2004). The environment of childhood poverty. *American Psychologist, 59*(2), 77.

Fisher, E. B., Fitzgibbon, M. L., Glasgow, R. E., Haire-Joshu, D., Hayman, L. L., Kaplan, R. M., ... & Ockene, J. K. (2011). Behavior matters. *American Journal of Preventive Medicine, 40*(5), e15-e30.

Frankenhuis, W. E., & de Weerth, C. (2013). Does Early-Life Exposure to Stress Shape or Impair Cognition? *Current Directions in Psychological Science, 22*(5), 407-412.

Frankenhuis, W. E., Panchanathan, K., & Nettle, D. (2016). Cognition in harsh and unpredictable environments. *Current Opinion in Psychology*, *7*, 76–80. doi:10.1016/j.copsyc.2015.08.011

Fujita, K. (2011). On conceptualizing self-control as more than the effortful inhibition of impulses. *Personality and Social Psychology Review, 15*(4), 352–66.

Gad, M. T., & Johnson, J. H. (1980). Correlates of adolescent life stress as related to race, SES, and levels of perceived social support. *Journal of Clinical Child & Adolescent Psychology*, *9*(1), 13-16.

Goodman, E., Adler, N. E., Kawachi, I., Frazier, A. L., Huang, B., & Colditz, G. A. (2001). Adolescents' perceptions of social status: Development and evaluation of a new indicator. *Pediatrics*, 108, 1–8. doi: 10.1542/peds.108.2.e31

Griskevicius, V., Ackerman, J. M., Cantú, S. M., Delton, A. W., Robertson, T. E., Simpson, J. A., ... & Tybur, J. M. (2013). When the economy falters, do people spend or save? Responses to resource scarcity depend on childhood environments. *Psychological Science*, *24*(2), 197-205.

Hadjar, A., & Samuel, R. (2015). Does upward social mobility increase life satisfaction? A longitudinal analysis using British and Swiss panel data. *Research in Social Stratification and Mobility*, *39*, 48-58.

Haushofer, J., & Fehr, E. (2014). On the psychology of poverty. *Science*, *344*(6186), 862-867.

Joshi, P. D., & Fast, N. J. (2013). Power and reduced temporal discounting. *Psychological Science*, *24*(4), 432-438.

Karlsson, N., Gärling, T., Dellgran, P., & Klingander, B. (2005). Social comparison and consumer behaviour: When feeling richer or poorer than others is more important than being so*. Journal of Applied Social Psychology, 35*(6), 1206–22.

Keltner, D., Gruenfeld, D. H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review*, *110*(2), 265.

Keys, A., Brožek, J., Henschel, A., Mickelsen, O., & Taylor, H. L. (1950). *The Biology of Human Starvation*. Minneapolis: University of Minnesota Press.

Kidd, C., Palmeri, H., & Aslin, R. N. (2013). Rational snacking: Young children's decision-making on the marshmallow task is moderated by beliefs about environmental reliability. *Cognition*, *126*(1), 109-114.

Kirby, K. N., & Marakovic, N. N. (1996). Delay-discounting probabilistic rewards: Rates decrease as amounts increase. *Psychonomic Bulletin & Review, 3*(1), 100-104.

Kong, N., Osberg, L., & Zhou, W. (2018). *The Shattered "Iron Rice Bowl"— Intergenerational Effects of Economic Insecurity During Chinese State-Owned Enterprise Reform*, University of Queensland School of Economics Discussion Paper Series 595, http://www.uq.edu.au/economics/abstract/595.pdf

Kraus, M. W., Piff, P. K., & Keltner, D. (2011). Social class as culture the convergence of resources and rank in the social realm. *Current Directions in Psychological Science, 20*(4), 246-250.

Kraus, M. W., Tan, J. J., & Tannenbaum, M. B. (2013). The social ladder: A rank-based perspective on social class. *Psychological Inquiry, 24*(2), 81-96. doi: 10.1080/1047840X.2013.778803

Kudrna, L. (2018). *An investigation of the relationships of absolute and relative socio-economic status with subjective well-being in the United States and England*. Unpublished PhD thesis, London School of Economics and Political Science.

Kurzban, R., Duckworth, A., Kable, J. W., & Myers, J. (2013). An opportunity cost model of subjective effort and task performance. *Behavioral and Brain Sciences*, *36*(6), 661-679.

Lachman, M. E., Weaver S. L. (1998). The sense of control as a moderator of social class differences in health and well- being. *Journal of Personality and Social Psychology*, *74*(3), 763.

Liu, L., Fengh, T., Suo, T., Lee, K. & Li, H. (2012). Adapting to the destitute Situations: Poverty cues lead to short-term choice*. PLoS ONE, 7*(4), e33950.

Luttmer, E. F. (2005). Neighbors as negatives: Relative earnings and well-being. *The Quarterly Journal of Economics*, *120*(3), 963-1002.

MacDonald, R., Shildrick, T. and Furlong, A. (2014) 'Benefits Street' and the myth of workless communities. *Sociological Research Online, 19*(3), p. 1

Magee, J. C., & Galinsky, A. D. (2008). Social hierarchy: The self-reinforcing nature of power and status*. Academy of Management Annals, 2*, 351–398. doi: 10.1080/19416520802211628.

Mani, A., Mullainathan, S., Shafir, E., & Zhao, J. (2013). Poverty impedes cognitive function. *Science, 341*(6149), 976-980.

Manstead, A. S. (2018). The psychology of social class: How socioeconomic status impacts thought, feelings, and behaviour. *British Journal of Social Psychology, 57*(2), 267-291.

McKendrick, J. H., Sinclair, S., Irwin, A., O'Donnell, H., Scott, G. and Dobbie, L. (2008) *The media, poverty and public opinion in the UK*. York: Joseph Rowntree Foundation.

Mischel, W., Shoda, Y., & Rodriguez, M. L. (1989). Delay of gratification in children. *Science, 244*(4907), 933-938. doi: 10.1126/science.2658056

Mischel, W. (1974). Processes in delay of gratification. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 7, pp. 249–292). New York, NY: Academic Press.

Mischel, W. (2014). *The marshmallow test: Why self-control is the engine of success*. New York, NY: Little, Brown.

Mittal, C., Griskevicius, V., Simpson, J. A., Sung, S., & Young, E. S. (2015). Cognitive adaptations to stressful environments: when childhood adversity enhances adult executive function. *Journal of Personality and Social Psychology, 109*(4), 604-621.

Mullainathan, S., & Shafir, E. (2013). *Scarcity: Why having too little means so much*. New York: Macmillan.

Nettle, D. (2010a). Dying young and living fast: Variation in life history across English neighbourhoods. *Behavioural Ecology, 21*(2), 387–395.

Nettle, D. (2010b). Why are there social gradients in preventative health behaviour? A perspective from behavioural ecology. (E. Von Elm, Ed.). *PLoS ONE, 5*(10), 6.

Paris, N. (2008, January 08). 'Tories attack 'something for nothing' culture. *The Telegraph*. Retrieved from https://www.telegraph.co.uk/news/uknews/1574927/Tories-attack-something-for-nothing-culture.html

Pampel, F. C., Krueger, P. M., & Denney, J. T. (2010). Socioeconomic disparities in health behaviours. *Annual Review of Sociology, 36*, 349.

Paskov, M., & Dewilde, C. (2012). Income inequality and solidarity in Europe. *Research in Social Stratification and Mobility, 30*(4), 415-432.

Pepper, G. V., Corby, D. H., Bamber, R., Smith, H., Wong, N., & Nettle, D. (2017). The influence of mortality and socioeconomic status on risk and delayed rewards: a replication with British participants. PeerJ, 5, e3580.

Pepper, G. V., & Nettle, D. (2017). The behavioural constellation of deprivation: causes and consequences. *Behavioral and Brain Sciences*, *40*.

Pepper, G. V. and Nettle, D. (2014a). Socioeconomic disparities in health behaviour: an evolutionary perspective. In D. W. Lawson and M. Gibson (Eds). *Applied evolutionary anthropology: Darwinian approaches to contemporary world issues.* New York: Springer-Verlag.

Pepper, G. V. & Nettle, D. (2014b). Perceived extrinsic mortality risk and health behaviour: Testing a behavioural ecological model. *Human Nature, 25*(3), 378-392.

Pérez-Asenjo, E. (2011). If happiness is relative, against whom do we compare ourselves? Implications for labour supply. *Journal of Population Economics*, *24*(4), 1411-1442.

Piff, P. K., Kraus, M. W., Côté, S., Cheng, B. H., & Keltner, D. (2010). Having less, giving more: The influence of social class on prosocial behavior. *Journal of Personality and Social Psychology*, *99*(5), 771.

Pittman, N. L., & Pittman, T. S. (1979). Effects of amount of helplessness training and internal–external locus of control on mood and performance. Journal of Personality and Social Psychology, 37(1), 39.

Ravallion, M. (2001). Growth, inequality and poverty: Looking beyond averages. *World Development, 29*(11), 1803-1815.

Ready, D. D. (2010). Socioeconomic disadvantage, school attendance, and early cognitive development: The differential effects of school exposure. *Sociology of Education, 83*(4), 271-286.

Reardon, S. F. (2013). The widening income achievement gap. *Educational Leadership, 70*(8), 10-16.

Roff, D. (1992). *Evolution of life histories: Theory and analysis*. New York, NY: Routledge.

Rohde, N., Tang, K. K., Osberg, L., & Rao, D. P. (2017). Is it vulnerability or economic insecurity that matters for health?. *Journal of Economic Behavior & Organization, 134*, 307-319.

Rotter, J. B. (1966). Generalised expectancies for internal versus external control of reinforcement. *Journal of Educational Research, 74*, 3, 185-190.

Rucker, D. D., & Galinsky, A. D. (2008). Desire to acquire: Powerlessness and compensatory consumption. *Journal of Consumer Research, 35*, 257–267.

Rucker, D. D., & Galinsky, A. D. (2009). Conspicuous consumption versus utilitarian ideals: How different levels of power shape consumer behaviour. *Journal of Experimental Social Psychology, 45*(3), 549-555.

Sapolsky, R. M. (2004). Social status and health in humans and other animals. *Annual Review of Anthropology, 33*, 393–418.

Seeman, M. (2008). Personal control. *MacArthur Research Network on SES & Health Psychosocial Notebook*. Downloaded from: http://www.macses.ucsf.edu/research/psychosocial/control.php

Senik, C. (2009). Direct evidence on income comparisons and their welfare effects. *Journal of Economic Behavior & Organization, 72*(1), 408-424.

Shah, A. K., Mullainathan, S. and Shafir, E. (2012). Some consequences of having too little. *Science, 338*(6107), 682–685.

Shah, A. K., Zhao, J., Mullainathan, S., & Shafir, E. (2018). Money in the mental lives of the poor. *Social Cognition, 36*(1), 4-19.

Sheehy-Skeffington, J. (2016). At the Bottom of the Hierarchy: Low subjective socioeconomic status impairs sense of control and executive functioning, with implications for health-related and financial decision-making. Paper presented at the European Human Behaviour & Evolution Association Conference, London, UK.

Sheehy-Skeffington, J. (2018). Decision-making up against the wall: A framework for understanding the behavioural dimension of low socioeconomic status. In A. Üskül & S. Oishi (Eds), *Socioeconomic Environment and Human Psychology: Social, Ecological, and Cultural Perspectives*. Oxford: Oxford University Press.

Sheehy-Skeffington, J., & Haushofer, J. (2014). Decision-making barriers and opportunities. In *Barriers and Opportunities at the Base of the Pyramid: The Role of the Private Sector in Inclusive Development*. Istanbul: UNDP Istanbul International Center for Private Sector in Development.

Sheehy-Skeffington, J., Kteily, N., & Hauser, O. (2016). *Antecedents and Consequences of Perceptions of Economic Inequality*. Tobin Conference on Inequality and Decision-Making Discussion Paper.

Sheehy-Skeffington, J., Price, M., Havmose, P., Scott, I., & Pound, N. (2017). *Exploring the cognitive impact of poor socioeconomic conditions: A case of deficit or of psychological shift?* Paper presented at the 18th General Meeting of the European Association of Social Psychology, Granada, Spain.

Sheehy-Skeffington, J., Price, M., Scott, I., & Pound, N. (2019). *Hunger and cognitive functioning: A case of ecological tuning*. Manuscript in preparation.

Sheehy-Skeffington, J., & Rea, J. (2017). *How Poverty Affects People's Decision-making Processes*. York: Joseph Rowntree Foundation.

Sheehy-Skeffington, J., & Sidanius, J. (2014*). Distracted looking up: Priming low socioeconomic status impairs executive functions.* Paper presented at the 17th General Meeting of the European Association of Social Psychology, Amsterdam, The Netherlands.

Sheehy-Skeffington, J. & Sidanius, J. (2015). *Out of my hands: Low socioeconomic status diminishes personal sense of control.* Paper presented at the British Psychological Society Developmental Section & Social Section Annual Conference, Manchester, UK.

Sheehy-Skeffington, J., Sidanius, J., & Price, M. E. (2016). Decision-making at the bottom of the hierarchy: The cognitive impact of perceiving oneself as low in socioeconomic status. In *Flash-talk delivered to the Society of Personality and Social Psychology Pre-Conference on the Emerging Psychology of Social Class, San Diego, CA*.

Sidanius, J., & Pratto, F. (1999). *Social dominance: An intergroup theory of social hierarchy and oppression*. New York: Cambridge University Press.

Sivanathan, N., & Pettit, N. C. (2010). Protecting the self through consumption: Status goods as affirmational commodities*. Journal of Experimental Social Psychology, 46*(3), 564-570.

Skinner, E. A. (1996) A guide to constructs of control. *Journal of Personality and Social Psychology, 71,* 549-570.

Smith, P. K., Jostmann, N. B., Galinsky, A. D., & Van Dijk, W. W. (2008). Lacking power impairs executive functions. *Psychological Science, 19*(5), 441-447.

Standing, G. (2011). The Precariat: The dangerous new class. *Bloomsbury Academic.*

Stearns, S. C. (1992). *The evolution of life histories*. Oxford, England: Oxford University Press.

Stephens, N. M., & Townsend, S. S. (2013). Rank is not enough: Why we need a sociocultural perspective to understand social class. *Psychological Inquiry*, 24(2), 126-130.

Stringhini, S., Sabia, S., Shipley, M., Brunner, E., Nabi, H., Kivimaki, M. and Singh-Manoux, A. (2010). Association of socioeconomic position with health behaviors and mortality. *Journal of the American Medical Association*, 303(12), pp. 1159–66.

Thompson S. C., Cheek P. R., Grahma M. A. (1988). *The other side of perceived control: Disadvantages and negative effects*. In S. Spacopan, S. Oshamp (Eds). *The Social Psychology of Health.* Beverly Hills, CA: Sage, pp. 69-93.

Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological Review, 117*(2), 440.

Üskül, A. K., & Oishi, S. (Eds.). (2018). *Socio-Economic Environment and Human Psychology: Social, Ecological, and Cultural Perspectives*. Oxford University Press.

Vallacher, R. R., & Wegner, D. M. (1987). What do people think they're doing? Action identification and human behaviour. *Psychological Review, 94*(1), 3.

Vandenbroucke, L., Verschueren, K., Ceulemans, E., De Smedt, B., De Roover, K. and Baeyens, D. (2015). Family demographic profiles and their relationship with the quality of executive functioning subcomponents in kindergarten. *British Journal of Developmental Psychology, 34*(2), pp. 226–44.

Vilhjalmsdottir, A., De Clercq, B., Gardarsdottir, R. B., Bernburg, J. G., & Sigfusdottir, I. D. (2019). Decreasing income inequality and adolescent emotional distress: a population-based case study of Icelandic adolescents 2006–2016. *International Journal of Public Health, 64*(2), 253-263.

Walpole, M. (2003). Socioeconomic status and college: How SES affects college experiences and outcomes. *The Review of Higher Education*, 27(1), 45-73.

Watson, B., Osberg, L., & Phipps, S. (2016). Economic insecurity and the weight gain of Canadian adults: A natural experiment approach. *Canadian Public Policy*, 42(2), 115-131.

Wilkinson, R. G. (1997). Socioeconomic determinants of health: Health inequalities: relative or absolute material standards?. *British Medical Journal, 314*(7080), 591.

Wilkinson, R. & Pickett, K. (2009). *The spirit level*. London: Allen Lane.

Wilkinson, R., & Pickett, K. (2018). *The inner level: How more equal societies reduce stress, restore sanity and improve everyone's well-being*. London: Penguin.

Wilkinson, R. G., & Pickett, K. E. (2017). The enemy between us: The psychological and social costs of inequality. *European Journal of Social Psychology, 47*(1), 11-24.

Wilson M., & Daly M. (2004). Do pretty women inspire men to discount the future? *Biology Letters 271*(S4):177–179.

Young, E. S., Griskevicius, V., Simpson, J. A., Waters, T. E. A., & Mittal, C. (2018). Can an Unpredictable Childhood Environment Enhance Working Memory? Testing the Sensitized-Specialization Hypothesis. *Journal of Personality and Social Psychology.* Advance online publication. http://dx.doi.org/10.1037/pspi0000124

Zhang, M., & Smith, P. K. (2018). Does Power Reduce Temporal Discounting? Commentary on Joshi and Fast (2013). *Psychological Science, 29*(6), 1010-1019.

Zhao, T., Jin, X., Song, W., Cui, H., & Ding, J. (2018). How a perceived status change increase consumers' tendency toward consumption through double psychological mechanisms. *Asian Journal of Social Psychology, 21*(1-2), 65-73.