

25 Social Class and Scarcity

Understanding Consumers Who Have Less

Anuj K. Shah

More than 4 billion people in the world earn less than \$10 a day (World Bank, 2014). And despite having limited funds, the world's poor often have to pay more for various goods and services. Grocery staples might be 20 percent more expensive in poor communities, credit can be more than 5,000 percent more costly, and cashing paychecks generates enough fees to support billion dollar businesses (Mendel, 2005; Prahalad & Hammond, 2002; Talukdar, 2008). With such a large swath of the population facing such striking challenges, this raises the question of how consumers think and decide when resources are scarce. Of course, social scientists have studied poverty for as long as there have been social sciences, but our understanding of human behavior in these contexts has largely been shaped by work in economics, sociology, anthropology, and political science. Psychologists and decision-making researchers have only more recently begun a systematic study of how poverty and other conditions of scarcity affect behavior.

Initially, psychological and behavioral economic theories responded to more standard economic views of poverty. One standard view suggested that the poor adapted to their environment over time and behaved optimally or rationally within its constraints. But the behavioral view highlighted how poor individuals make the same kinds of mistakes and exhibit the same biases that wealthy individuals do (Bertrand, Mullainathan, & Shafir, 2006). This approach showed how decision making in the context of poverty could be improved with nudges such as smart defaults, channel factors, and even interventions that considered a person's identity. This approach still overlooked an important fact: it assumed that the psychology of scarcity was no different from the psychology of abundance. The heuristics and biases were the same, but simply more costly for the poor.

However, recent research suggests that scarcity creates its own psychology and mindset (Mullainathan & Shafir, 2013). A better understanding of how this mindset plays out in consumer contexts has the potential to improve consumer welfare. Further, because psychological research in this area is still young, there remain many open questions. This chapter describes the questions being asked, those that remain, and the frameworks being developed to answer those questions.

The first section of this chapter focuses on how the fundamental experience of scarcity – having too few resources to meet all of one's needs – has profound

consequences for how people think and decide. The second section takes a broader view by considering the psychology of social class that emerges as poor individuals navigate a unique set of social roles and expectations. Each section describes the methods used to study these questions and then covers a series of empirical results on how cognition and behavior change under various forms of scarcity. Finally, this chapter concludes with an eye to the many unanswered questions in this domain and promising avenues for future consumer research, including interventions that can improve decision making in the context of poverty.

The Scarcity Mindset

To understand the scarcity mindset, first imagine how we manage expenses when resources are abundant. In this case, basic expenses such as groceries and utility bills do not require much attention, effort, or creativity to handle. Instead, these expenses come and go and rarely linger on the mind. Under scarcity, though, the world has a different texture. These expenses are no longer easily dispatched. Instead, each one becomes urgent and pressing and difficult to manage. Groceries, utility bills, and rent payments loom larger, and they capture our attention. Because of this, we focus more on how to solve these problems. That is, the scarcity mindset essentially consists of greater focus (Mullainathan & Shafir, 2013; Shah, Mullainathan, & Shafir, 2012).

This section will first describe how scarcity-induced focus cascades through behavior. Then, it will also explore how scarcity affects psychological and physiological well-being and broader social judgments as well. First, however, to better understand the empirical findings that follow, it is worth noting the methods used to study the scarcity mindset.

Empirical Approaches

Perhaps the most ecologically valid approach to studying scarcity consists of testing how fluctuations or cross-sectional differences in resources (e.g., income, caloric intake) affect behavior (e.g., Binkley & Bejnarowicz, 2003; Goldin & Homonoff, 2013; Hall, 2008; Mani, Mullainathan, Shafir, & Zhao, 2013; Shah, Shafir, & Mullainathan, 2015). However, this approach makes it difficult to establish causality. To remedy this issue, researchers have developed various techniques for creating scarcity in the lab. One approach endows participants with varying levels of resources to manage. Participants' cognition and behavior with those resources can then be measured (Shah, Mullainathan, & Shafir, 2012; Spiller, 2011).

It is also possible to prime a scarcity mindset more broadly. For example, some work has demonstrated that episodic recall of times when people feel financially deprived can activate the scarcity mindset (Sharma & Alter, 2012). More indirect primes might simply ask people how they would navigate an easy or difficult financial situation, where the latter is more likely to induce feelings of scarcity

(Mani et al., 2013). Importantly, many of these approaches show that relative or perceived scarcity and objective scarcity similarly shape behavior.

Scarcity and Focus

To appreciate just how general the relationship between scarcity and focus is, first consider a clever experiment done in a context far removed from that of poverty. Specifically, consider how thirst affects where our mind focuses. Aarts, Dijksterhuis, and De Vries (2001) had participants consume either salty treats (to induce thirst) or control treats that would not create thirst. Participants then completed a lexical decision task in which some words were drinking-related (e.g., juice, soda) and some were not (e.g., chair, table). Thirsty participants were significantly quicker to recognize drinking-related words. These results show how unmet needs capture the mind and elicit greater focus when people face scarcity. Even more compelling is the fact that there are analogues of this phenomenon when people are short on money. For example, Mullainathan and Shafir (2013) asked Boston commuters the starting fare on a taximeter. Lower-income respondents answered correctly more than 30 percent of the time, whereas wealthier participants were correct only 12 percent of the time. Similarly, poorer participants exiting a supermarket are better able to name the prices of the items that they just purchased than are wealthier participants. And this greater focus also makes low-income participants less susceptible to certain pricing strategies. In supermarkets, for instance, some products get more expensive when they are bought in bulk (i.e., there is a “quantity surcharge”). Of course, most consumers remain unaware of this pricing trick, instead expecting that they are saving money when they buy larger quantities. However, poorer consumers are less susceptible to quantity surcharges (Binkley & Bejnarowicz, 2003). Similarly, poorer consumers are less influenced by “hidden” taxes that are not included in the posted price (Goldin & Homonoff, 2013).

These findings also generalize to subjective feelings of scarcity. In one study, for instance, participants were asked to recall a time when they felt financially worse (or better) off than their peers. They then completed a visual discrimination task where they had to identify the stimulus that was least prevalent in an array. The stimuli in the discrimination task were unrelated to the experience of financial deprivation. Still, participants who felt subjectively deprived were better able to identify the scarce stimuli. These results are notable because they show that when resources are limited, people might focus on scarcity more generally rather than just on unmet needs or the scarce resource itself (Sharma & Alter, 2012).

Consequences of Scarcity-Induced Focus

As consumers shift their focus under scarcity, this can similarly alter their preferences. Sharma and Alter (2012) followed up the preceding findings to test whether participants experiencing financial deprivation might actually

prefer less-available items to mitigate feelings of deprivation. Participants first indicated their subjective financial well-being across a series of questions. They were then given the opportunity to consume M&Ms. One color of M&Ms was relatively abundant, while another color of M&Ms was scarce. Participants who felt financially deprived consumed a larger proportion of the scarce M&Ms than did participants who felt financially well off. Thus, under scarcity, it seems that attention shifts and preferences follow attention.

Importantly, because scarcity elicits greater focus and engagement on some problems and some needs, people will necessarily neglect other demands on their budget (Shah, Mullainathan, & Shafir, 2012). By focusing intently on how to deal with a utility bill, we might neglect or forget about a credit card payment coming due. Indeed, attentional neglect of this sort often occurs in low-income settings. Low-income homeowners might neglect routine maintenance as they instead focus on more pressing needs. Neglected, these routine repairs become major projects later on (Acquaye, 2011).

Lab experiments highlight this tension more clearly. In one study, participants played a video game called *Angry Blueberries*, in which they had to shoot blueberries at waffles scattered throughout each round (Shah, Mullainathan, & Shafir, 2012). Participants were either given a small number of blueberries per round (i.e., “poor participants”) or they were given a large number of blueberries (i.e., “rich participants”). Some participants could use only the blueberries allotted per round. Other participants could “borrow” blueberries from future rounds at interest, meaning they would have fewer blueberries for future rounds. Interestingly, poor participants spent more time aiming each shot than did rich participants. That is, they were more focused. They also used their blueberries more efficiently, earning more points per shot than did rich participants. Critically, however, this increase in focus on the current round came at a cost down the road. When allowed to borrow, poor participants borrowed significantly more blueberries from future rounds than did rich participants. As a result, poor participants overborrowed, earning fewer points when they had the flexibility to borrow than when they could not borrow. Further, this overborrowing among the poor seemed to have been driven by their increased focus. When poor participants spent more time aiming each shot on a given around (i.e., were more focused), they borrowed significantly more from future rounds.

This increase in focus also taxes cognitive capacity and mental bandwidth. In a seminal study, participants were recruited while in a shopping mall to complete several cognitive tasks (Mani et al., 2013). Some of these tasks measured fluid intelligence (e.g., Raven’s Progressive Matrices), while others measured cognitive control (e.g., Hearts and Flowers). Before participants completed these tasks, they were asked to imagine that their car suddenly needed to be repaired. Some participants imagined that the repair would be relatively inexpensive. Other participants imagined that the repair would constitute a significant cost. Participants thought aloud about how they would handle this expense. They then completed the cognitive tasks. High-income

participants performed equally well on the cognitive measures regardless of whether they had imagined a small expense or a large expense. And when low-income participants considered the small expense, they were hardly different from wealthier participants. But when they considered the large expense, low-income participants performed significantly worse on the subsequent cognitive tasks. The greater focus required from them had the side-effect of reducing their mental bandwidth. These bandwidth taxes are even evident when people are not told to explicitly think about different expenses. For example, sugar cane farmers in India show diminished mental bandwidth just before they harvest their crop (i.e., financially lean times) as opposed to after the harvest (i.e., relatively abundant times).

It is also worth noting how these results might shift the conversation about why the poor focus too much on some problems, borrow too much from the future, and seem to have limited bandwidth. While some have argued that all of these problems can be attributed to some personal failing that perpetuates conditions of scarcity, the preceding studies clearly suggest that the causal arrow can run in the opposite direction: scarcity leads to these cognitions and behaviors (Mullainathan & Shafir, 2013).

The Nature of Scarcity-Induced Focus

The preceding studies simply suggest that scarcity elicits greater focus. But a growing body of research helps unpack the nature of this focus in more detail. While consumers do not usually think about opportunity costs unless prompted (Frederick et al., 2009), the scarcity mindset leads people to think more carefully about trade-offs and opportunity costs. As mentioned previously, scarcity necessarily means that competing expenses and unmet needs will accumulate and linger on the mind. As a result, scarcity will provide many accessible comparisons that will frame the value of an item. For example, the cost of a utility bill will be measured not just in dollars or cents, but also in terms of how it compares to monthly fuel expenses or school fees. To demonstrate how scarcity leads people to consider opportunity costs, Spiller (2011) had participants complete a shopping task where they had several “days” during which they could buy items. If participants spent too much money on one day, then they would have less money for shopping on future days. Participants could also preview the products available on future days if they wished. That is, participants could consider the opportunity cost of spending money today (by attending to what would be available in the future). Participants were given budgets that were framed as relatively small (i.e., weekly budgets) or large (i.e., monthly budget). Under relative scarcity, participants were more likely to consider opportunity costs.

This simple result has striking consequences for the way consumers think about the value of things. Numerous results from the decision-making literature have shown that preferences and perceptions of value are often malleable. For example, in Thaler’s (1985) “beer on the beach” problem, people are willing

to pay more for a beer that will be delivered to them from a luxury resort than from a grocery store. It is the same beer, consumed on the same beach, and yet people offer more money when they know it comes from the resort. Why? Because it is difficult to have a clear sense of what small expenses are worth, people look for contextual cues that guide their valuation (Tversky & Kahneman, 1981). When these cues shift, so do preferences. In this case, the beer's point of purchase provides a cue (albeit an irrelevant one) to how much one should pay.

But if scarcity leads people to think about opportunity costs, then that means they not only ask themselves "What should I pay for this item?" but also "What must I give up in order to buy it?" Thinking about these trade-offs provides a more consistent frame for deciding what an item is worth. The trade-offs, for instance, do not depend on where the beer is purchased. Spending \$5 means giving up a cup of coffee or a sandwich, and that is true regardless of whether the beer comes from a resort or a grocery store.

Because these trade-offs offer a more stable frame for perceiving value, scarcity might actually make consumers less susceptible to certain context effects. In recent work, for instance, participants were asked what they would be thinking of when naming their willingness to pay in the preceding scenario. Wealthier participants were more likely to say they would use location as the relevant contextual cue. Poorer participants were more likely to say they would think about items they could not buy if they bought the beer (Shah, Shafir, & Mullainathan, 2015). As a result, wealthier participants offered higher prices for the beer when it came from the resort, but poorer participants were less influenced by the external context and named similar prices for both points of purchase (Mullainathan & Shafir, 2013; Shah, Shafir, & Mullainathan, 2015). In similar work, Hall (2008, 2012) asked participants whether they would be willing to travel for a discount on a purchase. The absolute value of the discount was always the same (e.g., \$50), but the original price of the purchase was low or high. When the original price is low, the discount represents a larger percentage off. And usually, people's preferences for the discount depend on its relative size (Tversky & Kahneman, 1981). But poorer participants' preferences were more stable and depended on the absolute value of the discount. This may have been because the opportunity cost of not taking the discount depends only on the discount's absolute value, not its relative size. Taken together, these results suggest that the scarcity mindset is characterized by a greater focus on trade-offs and opportunity costs, which can lead to substantial differences between how consumers decide under scarcity versus abundance.

The unmet needs and obstacles that scarcity creates can also shift the way people construe their world more generally. Roux and Goldsmith (2014), for instance, draw on research that shows that people think more abstractly when they encounter obstacles. They show that the obstacles scarcity creates lead to similar shifts in construal. Participants first completed an episodic recall task where they thought about times when resources were scarce.

Then participants completed a survey where they could describe an action either in abstract, high-level terms or in concrete, low-level terms. For example, “locking a door” could be described as “securing the house” (high-level) or “putting a key in the lock” (low-level). Participants who thought about scarcity were more likely to describe actions in abstract, high-level terms.

Scarcity and Impatience

The obstacles that scarcity creates may also change the way people value the future. For example, field data suggest that lower incomes lead to steeper discount rates (Tanaka, Camerer, & Nguyen, 2010). In lab experiments, when participants are led to believe that they have relatively little discretionary income, they also discount future outcomes more steeply (Callan, Shead, & Olson, 2011). And when participants experience negative income shocks in the lab, they discount more steeply as well (Haushofer & Fehr, 2014). When and why might scarcity lead people to value the future less? Some evidence suggests that scarcity elicits a physiological stress response. For example, when farmers in Kenya experience negative income shocks (because of drought), their cortisol levels rise. The increase in stress, in turn, might lead to steeper discounting (Haushofer & Fehr, 2014). Aside from the relationship between scarcity and discount rates, however, the fact that scarcity undermines physiological well-being raises the question of how it affects psychological well-being more broadly.

Scarcity and Well-being

The canonical results in this area suggest that income matters relatively little for well-being, at least once basic needs are met. To the extent that income does matter, it might matter more within countries than across countries (Easterlin, 1974). And relative income may matter more than absolute income (Oswald & Clarke, 1996). More recent research, however, suggests that both absolute and relative income matter even once basic needs are met (Sacks, Stevenson, & Wolfers, 2012). Poorer individuals report lower life satisfaction. Wealthier individuals, meanwhile, can derive additional life satisfaction from a variety of other sources, such as intimate connections and autonomy. But poorer individuals derive no additional benefit from these factors unless they are first able to meet essential consumption needs (Martin & Hill, 2012). The negative relationship between income and well-being also seems exacerbated in societies where there is greater income inequality. Under these conditions, lower-income individuals report that they trust people less and see society as less fair, which subsequently undermines their happiness (Oishi, Kesebir, & Diener, 2011). Given the importance that these social judgments play in determining happiness, how else might scarcity affect the way we see others and interact with those around us?

Scarcity and Social Decision Making

Recent research has primarily approached this question by considering the ways that scarcity affects moral judgment. Pitesa and Thau (2014) found that lower-income participants rated moral transgressions more harshly than did wealthier participants. But other research has shown that financial deprivation might make consumers more likely to transgress and more tolerant of transgressions (Sharma, Mazar, Alter, & Ariely, 2014). In one study, participants first played a game where they either earned money or lost money. Participants then moved on to a simple task where they encountered a conflict of interest. On the one hand, participants were told to respond as accurately as possible to a visual discrimination task. On the other hand, they were paid more if they responded in a biased way. That is, participants could earn more by lying about what they saw. In fact, participants who had been financially deprived in the first phase of the study were more likely to cheat on the second phase of the study, and these results hold when subjective feelings of deprivation are manipulated instead of objective deprivation. Moreover, subjectively deprived participants were less harsh in their judgments of similarly deprived individuals who stole. Although these results seem at odds with each other, Pitesa and Thau (2014) conducted a follow-up study where they found that subjective feelings of deprivation only affect the way that people judge *harmful* transgressions and only when people feel vulnerable. If theft seems relatively harmless (compared to violent transgressions) or people feel somewhat insulated from the thefts, then that could explain the discrepancy in these results. Further, stealing might be uniquely acceptable because it directly alleviates financial deprivation (Sharma et al., 2014).

Related research has focused on how scarce environments make people more self-oriented (Roux & Goldsmith, 2012). For instance, when participants imagine a world with limited resources, they are less likely to donate to charity. But if participants believe that other-oriented behavior will ultimately benefit the self in the future, then participants are more likely to act “generously” toward others.

The growing literature on resource scarcity currently offers several clear messages. First, scarcity elicits greater focus. As a result of this focus, some capacities improve in the short run under scarcity. People might spend more efficiently or be more aware of what they are spending. And they might be better able to think about trade-offs and the opportunity costs of transactions. But this increase in focus is effortful. It taxes mental bandwidth and increases physiological stress, which can in turn lead people to discount the future more steeply. This constellation of negative effects may undermine well-being more generally. And scarcity might simultaneously lead people to judge others more harshly (if their actions feel like a direct threat) while also making people more likely to cheat or otherwise take self-oriented actions.

Of course, focusing only on financial or material dimensions misses the broader context that surrounds consumers who have less. A lack of money or

other resources often accompanies other features of social class, such as one's education, social rank, and neighborhood (Kraus & Stephens, 2012). Some might even argue that differences in social class are on par with broader cultural differences (Krauss, Piff, & Keltner, 2011). The next section explores the research emerging on the psychology of social class.

The Psychology of Social Class

Early theories of social class imagined a “culture of poverty” where counterproductive behaviors, deviant values, and dysfunctional traits were common and were passed between generations (Lewis, 1968). Recent work on social class, however, takes a different approach. It does not define social class as a stable set of traits. Rather, it suggests that the conditions people encounter in their daily lives – especially experiences with their social rank – create a cognitive repertoire that guides thought and behavior (Krauss et al., 2012).

There are two features of poverty that seem to exert the greatest influence over social class. First, poverty leads to unreliable environments (Steele & Sherman, 1999). Second, people have to be more aware of and prepared to respond to these environments. They must be more aware of their surroundings because they cannot insulate themselves from them (Krauss et al., 2012). As described in this section, these two factors lead people to care more about trust and to adopt a more interdependent mindset.

Critically, this cognitive repertoire does not only depend on objective features of social rank (e.g., education, neighborhood), but rather it is also shaped by the local context and subjective feelings and perceptions of one's rank. In fact, perceived social class and objective socioeconomic status are only moderately correlated, suggesting that subjective social class is a separable construct (Krauss et al., 2012). Because the study of social class explicitly considers both objective and subjective dimensions, there are different methods that researchers use to develop convergent evidence in this domain.

Empirical Approaches

Measures of objective social class typically include three factors: income, education, and occupation. Income most directly tracks a person's access to material resources. Greater education exposes people to different social networks and cultural norms. Also, higher-status jobs often afford more autonomy, while lower-status jobs might require more supervision and routine (Kraus & Stephens, 2012). To measure subjective social class, researchers typically rely on the MacArthur Scale of Subjective Socioeconomic Status (Adler, Epel, Castellazzo, & Ickovics, 2000), where people rank themselves on a ladder with ten rungs. To manipulate subjective social class, researchers often shift the social comparisons that participants make. When comparing themselves to someone lower on the ladder, participants' feelings and actions align with

higher social class repertoires (and vice versa when comparing themselves to someone higher on the ladder). Despite being distinct constructs, both objective and subjective social class often exert similar influences.

Social Class, Trust, and Uncertainty

As mentioned previously, poverty introduces unreliability and uncertainty into many situations. As a result, poverty creates a psychology where trust is a precious commodity and people prefer to not depend on others financially (Steele & Sherman, 1999). For instance, Hall (2008) found that trust matters more for poorer individuals when they make monetary decisions. Participants were asked to imagine selling an item to either an individual whom they knew and who has been a family friend for years, or they imagined selling an item to someone who lived nearby but whom they did not know well. Participants then chose which payment option they would prefer: one where the buyer offered more money over the course of four payments, or one where the buyer offered less money up front. High-income respondents predominantly chose the higher-paying option, regardless of whether they knew the buyer. Low-income respondents also chose the higher-paying option when they knew the buyer. But when low-income respondents did not know the buyer, they chose the lower-paying option because they could obtain money up front and would not have to trust the person to continue making payments. In fact, wealthier participants self-reported that they cared more about the financial outcomes of a transaction, whereas poorer individuals reported that they cared more about being able to trust the other party involved in the transaction.

Because poorer consumers confront volatility and unreliability on a regular basis, this might lead them to prefer financial options that cost more money but allow them to avoid committing to something well in advance. For example, rent-to-own contracts are remarkably common in low-income settings. Under these contracts, consumers pay a small, fixed-amount over the course of many weeks. As a result, they pay much more than list price for the product. But poorer consumers prefer these arrangements, in part, because they are “escapable” and allow consumers to change course should they encounter income shocks (Zikmund-Fisher & Parker, 1999).

Social Class, Interdependence, and Control

This volatility comes not just from a lack of money but also from institutions and other people. Whereas wealthier individuals can leverage institutional power for their benefits, poorer individuals cannot and might instead be *influenced* by institutions. Some research suggests that this leads to decreased feelings of personal control. In one study, participants reported their subjective social status as well as how much they agreed with statements like, “Whatever happens in the future mostly depends on me,” and, “There is little I can do to change many of the important things in my life” – those who reported

lower subjective status reported feeling less personal control. Moreover, lower-status individuals considered more contextual explanations for events whereas higher-status individuals focused on dispositional attributions (Krauss, Piff, & Keltner, 2009).

Because poorer individuals might not have the means to insulate themselves from threats or shocks, they have to be more aware of their environment, including other people (Krauss et al., 2012). For example, subjective social class was manipulated by having participants compare themselves to people who were below them in social rank or above them in social rank. Participants were then asked to name the emotions on faces displaying nervousness, hostility, playfulness, and other expressions. Those with subjectively lower status performed better, suggesting that lower social status leads to greater empathic accuracy (Kraus, Cote, & Keltner, 2010). In further work, participants were paired up and told to get to know their partner through a series of discussion questions. These interactions were recorded and then coded based on whether participants showed that they were engaged (e.g., nodding head, raising eyebrows) or disengaged (e.g., doodling, fiddling). Participants with lower socioeconomic status were consistently more engaged than participants with higher socioeconomic status (Kraus & Keltner, 2009). This series of results suggests that lower status makes people more attuned to their settings, while perhaps also feeling more at the whim of the environment.

To some extent, this focus on the environment can increase compassion and prosociality among individuals with lower social class (Krauss, Cotes, & Keltner, 2010). For instance, in a dictator game, lower social class participants made more generous offers to their partners. Participants who were made to feel as if they had lower social rank donated more to charity. Finally, because the environment and context matter so much in lower social classes, people may feel more compelled to blend in with their setting rather than trying to stand out. Indeed, in a study where participants were given a chance to choose a unique pen or a more common pen, lower social class participants were more likely to choose the common pen (Stephens, Markus, & Townsend, 2007). Note that these results stand slightly in contrast to some of the aforementioned results where resource scarcity led people to be more self-oriented (Roux & Goldsmith, 2012). This discrepancy might be due to differences in how people think when focused specifically on a lack of material resources rather than on the broader context of social class.

Social Class and Social Comparison

As some of the preceding results show, subjective social class – especially relative rank – can influence thoughts and behavior as much as objective social class. In one study, relative rank mattered more than social class. Participants compared themselves to either people below them or above them in rank. Those who compared themselves to people lower than them reported greater subjective well-being. More striking, relative rank had a stronger effect on

subjective well-being than did socioeconomic status (Anderson, Kraus, Galinsky, & Keltner, 2012).

In fact, people are remarkably averse to occupying the lowest tier in society. For instance, a survey of Americans showed widespread support for increasing the minimum wage. However, people who earned just above the minimum wage were least supportive, presumably because the wage increase would not affect them, but would instead improve the lot of those just below them, reducing (or eliminating) the gap between themselves and the bottom tier. And in a lab experiment, participants in a multiplayer game were randomly assigned different endowments (e.g., \$1, \$2, . . . \$6). For each participant (except those at the extremes), there was always one person who earned \$1 more and one person who earned \$1 less. Participants were then given an additional \$2 to distribute to another player who was either just above them or just below them in rank (based on the initial endowments). Many participants redistributed the \$2 to participants who were below them. However, those who were in second-to-last place were least likely to do so, presumably because this would have resulted in them moving to last place (Kuziemko, Buell, Reich, & Norton, 2014).

Consumers incorporate these comparisons into how they spend. For example, during recessions people spend less on positional goods because they do not need to spend as much to keep up with others (who will also have had to reduce their spending; Kamakura & Du, 2012). Poor individuals might be prone to conspicuous consumption, choosing to spend in a way that makes them seem wealthier than their peers, rather than spending on nutrition or education or even saving the money (Moav & Neeman, 2012). These social comparisons can also lead poor consumers to play the lottery more often (Haisley, Mostafa, & Loewenstein, 2008). Poor consumers tend to see lotteries as one of the few ways for them to compete on equal footing with higher-status individuals (i.e., winning the lottery is one of the few positive life outcomes where the wealthy do not have a built-in advantage). Indeed, when subjective feelings of lower social status are induced in consumers, they purchase lotteries at a higher rate, and this is particularly true when their attention is drawn to the fact that wealthier consumers do not have a better chance at winning the lottery than they do.

Clearly, more than just material resources shape how consumers behave when they face scarcity. Instead, consumers carry with them a set of expectations, thought patterns, and beliefs that emerge from the broader contexts surrounding resource scarcity. These cognitive repertoires lead people to pay more attention to the environment (and others in the environment), to care more about trust and uncertainty, and to focus on social comparisons as they approach the bottom rungs of a social group. The research summarized in two preceding sections provides the outlines of a framework that can be leveraged against many more questions in future work. The next section covers a few of these promising avenues for additional research.

Toward a Better Understanding of Having Less

Although this chapter has primarily focused on monetary scarcity and the context of poverty, additional research suggests that the scarcity mindset similarly arises when we lack other resources, such as time or calories. But which features of the scarcity mindset generalize across resources and which are specific to money?

Scarcity across Resources

Some research suggests that scarcity of one resource can activate the scarcity mindset with other resources. For example, when people are hungry, they also become stingier and are less likely to donate to charity (Briers, Pandelaere, Dewitte, & Warlop, 2006). Also, people sometimes treat time losses like monetary losses (Leclerc, Schmitt, & Dube, 1995). But other research finds that these resources differ (Okada & Hoch, 2004; Sani & Monga, 2008; Zaubermaier & Lynch, 2005). Specifically, people treat money differently because its value is less ambiguous than the value of other resources, such as time. Future research should categorize resources along different dimensions (e.g., ambiguity of value, ease of exchange) and systematically explore how these dimensions shape behavior. This taxonomy is also essential for determining how different forms of scarcity change the way people think and behave. It may be that scarcity of some resources captures attention more than others, for instance.

Focusing on Scarcity

This raises an additional question worth pursuing. Namely, when do people recognize scarcity in the first place? Much of the research so far suggests that scarcity makes people myopic. It focuses people on making ends meet today at the expense of thinking about tomorrow. But the poor do save for the future (Collins, Morduch, Rutherford, & Ruthven, 2010). However, they do not put their savings into some general account, but rather earmark it for a specific expense in the future (e.g., an appliance, a child's wedding). Saving for specific expenses suggests that consumers recognize that funds are lacking for future priorities. Further research should explore when people recognize scarcity in the moment versus when they anticipate scarcity in the future. Moreover, some of the preceding results suggest that the poor discount the future more steeply. But what is the nature of this "discounting"? It seems like there might be two possibilities: (1) the poor consider the future and value it less; or (2) the poor are not attending to the future at all because current demands are too pressing. Teasing apart these mechanisms could help develop more effective interventions to increase savings among the poor.

It is also worth noting that many of the preceding studies suggest that the scarcity mindset can be momentarily activated. That is, the same person can look entirely different depending on whether resources are momentarily scarce

or abundant. But some researchers argue that repeated exposure to scarcity gradually changes and shapes psychological systems, perhaps leading to more permanent changes in the way people behave.

Acquiring the Scarcity Mindset

For instance, Chakravarti (2006) suggests that prolonged deprivation reduces autonomy and lowers motivation. As a result, people adapt to scarcity in a few ways. First, they become better at handling low-value decisions, but are less capable of handling high-value decisions. Poor consumers might spend too long deliberating the trivial. Second, the poor might eventually become resigned to their circumstances or suffer from learned helplessness. And third, the capacity to aspire might be less developed among the poor. Similarly, Griskevicius and colleagues (2013) argue that people develop life-history strategies that are either fast (e.g., myopic, impulsive, risk taking) or slow (e.g., far-sighted, risk avoiding). People develop these strategies in response to environmental circumstances, with fast strategies being a common response to scarcity. And these life-history strategies seem stable enough to be triggered easily. For example, participants of high and low socioeconomic status were either primed with pictures of economically depressed areas or were primed with control pictures. When shown the economically depressed pictures, low socioeconomic status participants subsequently behaved more impulsively and took more risks.

Naturally, this raises the question of which features of the scarcity mindset are stable and which are deployed in response to specific circumstances. Furthermore, what features of the environment affect whether people acquire a stable scarcity mindset or one that is more temporary? Perhaps when people believe their circumstances are less changeable, they imprint the scarcity mindset more deeply.

Ultimately, to better understand which features of the scarcity mindset are stable and which are not, we first need a more detailed taxonomy of these features. To accomplish this, consumer researchers may need to rely on ethnographic approaches more than experimental research. For example, through a series of qualitative interviews, Underlid (2007) found that poor respondents feared the future because of the overwhelming insecurity they faced on a daily basis. Indeed, exploratory research such as this might be most important at this stage because the field is still at the beginning of understanding the psychology of scarcity and social class.

As we broaden our conceptual understanding of these contexts, it also becomes possible to study practical approaches for helping consumers who confront scarcity. Future work should directly tackle the challenge of translating the aforementioned theoretical concepts and frameworks into interventions that can alleviate some of difficulties facing the poorest and most vulnerable members of society.

Intervening on the Scarcity Mindset

Research on scarcity-induced focus suggests that interventions will be particularly effective if they disrupt attentional tunneling and help reorient poor consumers' attention to neglected priorities. For example, one intervention reoriented attention using simple text message reminders to save money for the future. Participants who received text message reminders increased their savings rate by 6 percent relative to those who did not receive these reminders (Karlan, McConnell, Mullainathan, & Zinman, 2010). The effectiveness of this intervention suggests that additional gains could be made by looking for other ways to disrupt the attentional set that scarcity induces. But this also raises a conceptual question about which features of the environment (or which personal goals) are most likely to be neglected when scarcity shifts attention. That is, future research will first need to map out where attentional neglect will be most likely and most costly under scarcity, and then additional work will need to develop targeted attentional interventions.

Because of scarcity's effects on mental bandwidth, poor consumers might find it particularly difficult to navigate even small obstacles or hassle factors during the day. A compelling study examined whether poor consumers would follow-up on a two-hour workshop about banking to open their own bank account. Although 90 percent of participants reported wanting to open a bank account after the workshop, only 50 percent did. Why might this be? Participants could not open the bank account immediately. Instead, they had to carve out the time and mental energy from another day to do so. These small hassles become magnified because scarcity tires the mind. In fact, more participants followed through when the workshops were tweaked so that attendees they could immediately begin the paperwork to open accounts (Bertrand, Mullainathan, & Shafir, 2006). Failure to open bank accounts is just one example of a host of behaviors among the poor that might stem from taxed bandwidth. For example, the poor miss more medical appointments (Karter et al., 2004), show worse medical adherence (DiMatteo, 2004), speak to their children less or snap at their children more (McLoyd, 1998), and are less focused at work (Kim & Garman, 2004). Many of these behaviors have been attributed to the dispositions or personality traits of the poor, but if these result from limited bandwidth, then simple channel factors might substantially change behavior.

Finally, future research should consider which context and framing effects are reduced under the scarcity mindset. Such work could guide the approaches policy makers use to nudge low-income consumers. For example, not all frames are created equal for the poor. In nudging consumers to rely less on payday loans, one could frame the loan's interest rate in terms of the rate per pay period (e.g., 20 percent) or the rate per year (e.g., more than 500 percent). The latter frame seems more startling, but is in fact no more effective. Instead, poor consumers respond more to a different frame: describing the cost of the loan in absolute dollar terms (Bertrand & Morse, 2011). Perhaps this frame does a better job of highlighting the opportunity costs of the loans, which resonates more with the scarcity mindset.

Intervening on Social Class and Identity

Still stronger interventions might consider the broader context surrounding scarcity. For example, because poor individuals often lack the autonomy or agency that wealthy individuals have, they might experience some degree of fatalism. Some have suggested that the poor struggle with the capacity to aspire or set visionary goals (Bernard, Dercon, Orkin, & Taffesse, 2014), but carefully designed interventions can reverse this pattern. For example, one group of participants in rural parts of Ethiopia were shown a documentary of people from similar communities who succeeded without help from others. Participants who saw this documentary (as opposed to a control documentary) had stronger aspirations and saved more money for the future. Future research should first explore the goals and aspirations that poor individuals hold. Of course, these might vary widely across contexts, but there may be common threads. Research could then consider why scarcity undermines aspirations and which behaviors benefit most from improving aspirations.

Related to this point, poor individuals face many forms of stigma. Alleviating that stigma might remove one barrier to advancement. Hall, Zhao, and Shafir (2013) found compelling evidence for this when they had participants in a soup kitchen either complete an affirmation manipulation (e.g., discussing a time they felt successful) or a control exercise (e.g., describing a meal). Affirmed participants were more likely to later take up useful financial information and performed better on subsequent measures of cognitive capacity. That is, removing the stigma of being poor alleviated some of the bandwidth tax of being poor. Future research might explore other positive effects of affirmation among the poor. Translating these concepts into more direct interventions to remove the stigma of being poor would also increase the welfare of low-income consumers.

But this work highlights a much more powerful point. The poor experience not just a poverty of resources but also a poverty of bandwidth (Mullainathan & Shafir, 2013). Addressing the lack of bandwidth might be an easier way to improve the lives of the poor. Importantly, this approach requires a broader understanding of the inputs into mental bandwidth. While most of the research on the scarcity mindset highlights how income is a strong input, this is also the hardest factor to change (except through unconditional cash transfers). But a host of other factors associated with poverty might also reduce bandwidth. For instance, the poor experience more pain and worse health, both of which have not just physical effects but also psychological effects. They, too, capture the mind and serve as distractions. The poor also experience more social isolation and conflict, which seem likely to tax bandwidth. But these inputs might be far easier to alleviate and might offer stronger levers for improving the lives of the poor in the future.

Concluding Remarks

The study of poverty and other conditions of scarcity is not new. But the turn toward developing a psychology of scarcity is fairly recent. And while

the preceding research represents a series of promising first steps, there remains significant work to better develop frameworks for understanding how consumers behave when money is short and when navigating the social context of having less. Such frameworks will necessarily combine insights from cognitive and social psychology while also incorporating ideas from economics, sociology, and public policy. This topic is profoundly important, given the number of people in the world facing some form of scarcity. There is much to gain from research that more deeply explores the lives of consumers who have less.

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