Check for updates

Received: 22 November 2023 | Accepted: 22 November 2023

DOI: 10.1002/arcp.1096

REVIEW

Lay economic reasoning: An integrative review and call to action

Amit Bhattacharjee[1] | Jason Dana[2]

[1]Leeds School of Business, University of Colorado Boulder, Boulder, Colorado, USA

[2]Yale School of Management, Yale University, New Haven, Connecticut, USA

Correspondence
Amit Bhattacharjee, Leeds School of Business, University of Colorado Boulder, Boulder, CO, USA.
Email: amit.bhattacharjee@colorado.edu

Jason Dana, Yale School of Management, Yale University, New Haven, CT, USA.
Email: jason.dana@yale.edu

Abstract

Consumer psychology refers to how people think and act within an economic role in market exchange. However, we know little about how consumers actually perceive these roles, or how they understand markets and economic activity more broadly. That is, we lack an understanding of the economic reasoning of non-expert consumers, how it departs from formal economic reasoning, and why. The current paper is intended to address this gap. We provide an integrative review of research on lay economic reasoning that consistently reveals how differently lay consumers and economists think about markets. We propose a unifying mental model to explain these divergences. Suggest why it is reinforced by what lay consumers observe (and do not observe) through firsthand marketplace experience, and note its potential evolutionary basis. We then highlight how understanding lay economic reasoning can not only help explain a wide array of marketplace phenomena, but also provide a novel lens to help advance, generate, and better integrate theory across many active literatures within consumer psychology. Without markets, there are no consumers and there is no marketing. We therefore call for consumer psychologists to take ownership of the study of lay economic reasoning and make markets more central to marketing scholarship.

KEYWORDS
beliefs and lay theories, economic psychology, ethics and morality

1 | INTRODUCTION

Consumer psychology, quite simply, is the psychology of consumers. It examines consumers' perceptions, beliefs, and feelings when making purchase decisions. One aspect of this simple definition that may be underappreciated is that it specifies this object of study as specifically *economic*: a consumer is a role played by a person in a voluntary economic exchange. Today, that role is typically played within the context of complex global markets that organize the production and distribution of scarce resources of every sort. Accordingly, consumer psychology can best be characterized as the systematic study of human psychological processes and behaviors that are specific to these roles in economic exchanges across various market contexts. Leading scholars have written for decades about the need to develop theories that actually speak to these marketplace roles. Consider these recent scope-setting editorial mission statements and definitional

Amit Bhattacharjee is an Associate Professor of Marketing at the Leeds School of Business, University of Colorado Boulder. Jason Dana is an Associate Professor of Management and Marketing at the Yale School of Management, Yale University. Both contributed equally, and the order is alphabetical.

The authors thank Alixandra Barasch, Corey Cusimano, John Lynch, Barbara Mellers, Nicholas Reinholtz, Evan Weingarten, Lawrence Williams, and seminar participants at Yale University, the Consumer Financial Decision Making Lab at the University of Colorado Boulder, and the "Meaning and Morality in the Marketplace" session at the 12th Triennial Choice Symposium at INSEAD, for their many insightful comments and suggestions. They have no conflicts of interest to disclose.

 © 2024 Society for Consumer Psychology.

prescriptions from outlets like the *Journal of Consumer Research* and the *Journal of Consumer Psychology*:

> … I am contending that we need to show how the process operates differentially in consumption and general settings and therefore uniquely explains a consumption phenomenon.
>
> (Deighton, 2007, p. 280)

> Our core is characterized by the study of people operating in a consumer role involving acquisition, consumption, and disposition of marketplace products, services, and experiences. (MacInnis & Folkes, 2010, p. 900)

> …we see consumer research as essential to understanding how people deploy their resources of time and money and how these decisions affect individual consumers and the broader world, including social relations and stewardship of the world's resources. If you accept the above premise that consumer research is inherently important, then it is only a small step to believing that we must be integrative.
>
> (Peracchio et al., 2014, p. vi)

> We encourage research that focuses on phenomena of unique interest to consumer researchers … as well as research that examines human behaviors … as they are uniquely shaped by market forces.
>
> (Inman et al., 2018, p. 956)

> Consumer perception that there is such a potential exchange relationship is, as noted above, fundamental to the definition of the interaction as a market relationship. Marketplace morality is a subset of general, social morality and only arises when at least one consumer perceives the possibility of market exchange.
>
> (Campbell & Winterich, 2018, p. 170)

> This structure frames our goal to publish contributions in conceptual thought and empirical findings that advance the body of collective wisdom on consumer psychology.
>
> (Block et al., 2021, p. 4)

This paper provides an integrative review of disparate and largely nascent research on lay economic reasoning, or the economic beliefs and reasoning processes of economically untrained consumers. This research shows that people think much differently from economic scientists about the basic building blocks of purchase behavior. There are no consumers without markets. And there is no marketing without markets. We thereby argue that advancing theory about the consumer entails understanding lay beliefs about markets. For example, it is difficult to understand consumers' perceptions of price fairness without understanding where they think prices come from in the first place. And consumers' reactions to increasing automation can be better understood by accounting for their implicit theories of labor, such as beliefs about whether automation "takes away jobs" and how it affects the economy.

Lay economics is not simply behavioral economics, nor its close cousin, judgment and decision-making (JDM). Both study deviations from idealized rational choice models, such as whether people's choices adhere to preference axioms, or whether they act like Bayesian updaters when making probabilistic judgments. Because such deviations speak to whether consumers spend their money and time wisely, behavioral economics and JDM have long overlapped with and influenced the study of consumer psychology. In contrast, lay economics concerns how people reason about the marketplace itself, and the processes that determine the terms of exchanges, a subject that has received less attention and had less influence thus far. Whereas the purview of behavioral economics and JDM is largely restricted to the economics of the household or family, lay economics draws on beliefs related to many areas of economic inquiry—including trade, industrial organization, labor, and macroeconomics—to provide a variety of distinct insights and applications.

In what follows, we consider how consumers' firsthand marketplace experiences paint a misleading picture of their inner workings, and why evolved cognitive and cultural capacities do not help (Section 2). We next propose that, as a consequence, lay mental models of market exchange are intuitive, moralized, and zero-sum, and yield judgments that systematically diverge from economic science (Section 3). We highlight the implications of this divergence across a number of market contexts and describe how understanding lay versus expert economic reasoning can shed new light on a variety of marketplace phenomena and findings from consumer psychology research (Section 4). We then discuss why the field of consumer psychology could benefit from making additional contributions to the study of lay economic reasoning (Section 5), and close by providing some brief conclusions (Section 6).

2 | THE BASIS OF LAY ECONOMIC REASONING

Lay beliefs and theories (often used interchangeably with intuitive, naive, folk, or implicit) beliefs and theories) refer to informal, common-sense explanations for observable phenomena that are defined by their systematic divergence from formal, evidence-based scientific explanations (Furnham, 1988). Lay theories help people explain and predict the world, and have been studied across dozens of domains of knowledge (e.g., physics, psychiatry, medicine, evolutionary biology, public policy, law).

For example, research on lay physics has documented a variety of erroneous beliefs about the motion of objects (e.g., McCloskey, 1983; McCloskey et al., 1980). Many adults believe that a ball dropped from a moving airplane will fall straight down or even backward. They

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

thereby fail to intuitively grasp the laws of Newtonian mechanics, which dictate that even if the ball is slowed by air resistance, it still has enough momentum to continue its forward path unless acted upon with sufficient force (Kaiser et al., 1985; McCloskey et al., 1983).

Why might that be the case? Anyone who has dropped an object from a moving vehicle has observed that, relative to their own frame of reference, it *does* go backward. Errors of this type suggest the primacy of subjective firsthand experience, or the notion that "seeing is believing" (McCloskey et al., 1983), in shaping our understanding of the physical world. Rather than being corrected through experience, these misconceptions are reinforced by what people can see with their own eyes, especially if they concern unusual and rarely encountered problems, and do not interfere with their ability to navigate more typical ones. Only by internalizing physical laws derived through systematic observation and scientific reasoning can people correctly predict the path of the ball. But such abstract reasoning about the physical world confers little advantage in daily functioning. Despite their imperfections, lay mental models of physics are quite sufficient to meet the challenges we face on a day-to-day basis (e.g., most of us manage not to continually bump into walls or stagger into oncoming traffic each day).

Given that many people also experience marketplace interaction on a daily or near-daily basis, their lay mental models of economics are also "good enough" in *some* regards (e.g., purchasing goods and services that generally meet our daily needs). Yet there is an important difference between lay reasoning about physics versus economics. Potentially misleading firsthand experiences, such as dropping a ball from a fast-moving vehicle, represent the "exception," as our observations of the physical world overwhelmingly result in useful intuitions. In contrast, we suggest that such experiences instead represent the *rule* when it comes to lay economic reasoning. That is, most marketplace observations are potentially misleading, resulting in economic intuitions that often lead us astray.

2.1 | The seen and the unseen

Perhaps the first account of lay economic reasoning came from Bastiat's (1845) descriptions of "economic sophisms." Most famously, he described what came to be known as "the broken window fallacy" to illustrate the importance of considering unseen factors (i.e., opportunity costs). It starts with a shopkeeper's son who accidentally breaks the shop window, making the shopkeeper pay a glazier six francs to fix it. The glazier then spends those six francs buying other goods and services in the local economy. The providers of those goods and services do the same, in turn, and so the cycle continues. Bastiat suggests that many members of the public might thus conclude that the broken window benefited local industry. That does seem to be the case if we consider only what is seen.

But what is unseen is that if the window had never broken, the shopkeeper could have spent those six francs in other ways, such as on a new pair of shoes, and thus benefited the local industry in the same way. Moreover, while the shopkeeper will enjoy having an intact shop window once it is repaired, he could have enjoyed an intact window *and* a new pair of shoes if it had never broken. Considering the unseen as well as the seen makes the economic costs of the broken window clear: the shopkeeper's welfare is harmed, and there is otherwise no net benefit to the local economy. Six francs worth of value was destroyed, not created. Lay intuitions to the contrary are by no means peculiar to Bastiat's time: as detailed in Section 4, economic arguments for buying local invoke similar logic to this day.

Though consumer research has demonstrated that people often neglect unseen opportunity costs (Frederick et al., 2009; Spiller, 2011), the primacy of the seen over the unseen may have implications more fundamental and far-reaching than previously realized. In fact, the inability to observe the role of hidden market forces may be a defining feature of firsthand consumer experience, and an important reason why lay mental models of markets appear incomplete.

2.2 | Why firsthand marketplace experience misleads

Let us consider how most people experience the marketplace. Almost all their experiences come from the consumer side in discrete, individual transactions with sellers. When considered in isolation, any one of these individual transactions is *zero-sum*. That is, each can be represented as a fixed amount of surplus that must be distributed between the producer and the consumer. Even if these exchanges are voluntary and mutually beneficial, they are nonetheless zero-sum in the sense that more surplus for one party leaves less for the other. In an isolated exchange, prices are therefore purely allocative, and directly determine who gets what. Moreover, for many exchanges in developed economies, pricing and product quality decisions are made by sellers alone, while consumers get to decide only whether to take or leave the terms they set. Consider a simple, concrete example in a product domain where value is well defined and easy to understand: a producer who sells basic tools like handsaws. They could gain more profit at the consumer's expense by charging a higher price. They could also profit at the consumer's expense by using cheaper, lower-quality materials to reduce costs, or by misrepresenting the quality of the saw.

Contrary to the way these exchanges are experienced by lay consumers, economic experts do *not* regard them as taking place in isolation and do not assume that their terms are determined solely by the intentions of both parties or observable aspects of the exchange itself (Bhattacharjee et al., 2017; Leiser & Shemesh, 2018). They instead regard them as embedded in a complex economic system in which the behaviors of all market actors are interdependent. From this perspective, fully understanding an exchange requires considering the outside factors that led up to it and shaped its terms, as well as how it affects those factors going forward.

The voluntary nature of market exchange has important disciplining effects on how sellers behave. The producer of the saw must

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

consider how much individual consumers are willing to pay. If they charge too much, consumers will revert to their next best option, such as buying from a competing seller or deciding that they do not need a saw after all. If the producer cuts corners or misrepresents quality, they could quickly develop a bad reputation and amass negative reviews, losing repeat and future business to competitors. Even if individual consumers experience each purchase in isolation, this is clearly a repeated game from the producer's perspective. Even at the individual transaction level, prices are not determined arbitrarily or on a discretionary basis alone: the producer's decisions are tightly constrained by the needs of their clientele as a whole and the opportunity costs they face (i.e., each consumer's alternatives to buying a saw).

The producer's own opportunity costs also depend on what consumers value about their offerings compared to competing alternatives. For example, which tools should they make? Could they make more money by serving professionals or weekend warriors? Should they offer their products regionally or expand to broader retail markets? These decisions also depend on the economic conditions and opportunity costs facing actors in intersecting markets, which dictate the wages their workers will demand and the costs of the material inputs to their products. These costs, in turn, dictate the minimum price the producer must charge to avoid losing money on each sale.

Market exchanges are properly understood as part of a complex system, in which product prices (as well as attributes and availability) are shaped by an intricate web of interdependencies with countless marketplace actors beyond the parties involved in any single exchange. Within that system, market prices act as informative signals, whereby higher prices reveal more valuable uses of scarce resources, goods, services, or labor. As such, prices are not merely allocative. They also provide incentives that guide the behavior of consumers and producers. On the consumer side, prices aggregate information about the trade-offs involved in various purchases. Higher prices indicate which supplies are scarce relative to the demand for them, encourage conservation, and induce consumers to seek out lower-priced substitutes. On the producer side, higher prices indicate what consumers deem most valuable, and thus where they should invest more resources. The allure of profits leads producers to create new products that people want, to bring them where they are most needed, and to more efficiently produce them so that they can offer better prices than their competitors and win more business. In this way, market prices incentivize behaviors that increase the societal pie and help to manage or alleviate scarcity.

Crucially, all these forces, which serve to bring a particular product to a particular time and place at a particular price, are literally invisible! They are far removed in time and place from any single transaction. Consumers have no way of observing how the dynamics of market competition create the terms of the individual exchanges they experience. And of course, since opportunity costs represent unrealized counterfactual outcomes, they cannot be observed by anyone. Conversely, the zero-sum aspects of market exchange are readily apparent in any isolated transaction: the immediate impact of prices on the static distribution of surplus between sellers and buyers is obvious. Based on what lay consumers can observe, sellers often appear to have sole discretion over the prices they can charge and product quality decisions they make and to gain more profit if they shortchange consumers.

2.3 | Why our minds are unprepared to intuit economics

Even if firsthand experience of markets is misleading, it does not necessarily follow that lay theories must be inaccurate. In many contexts, lay theories reflect "core knowledge" that is innately possessed or acquired through innate learning mechanisms (Carey & Spelke, 1994, 1996). For example, by 6 months of age, infants who see one object roll behind a screen toward a partially visible stationary object, and then see the second object begin to move in the same direction, can infer that the first object hit the second. The capacity of infants to reason about a hidden interaction of this sort, even with so few prior observations of objects in motion, provides evidence that the human mind is well prepared to infer certain properties of the physical world. Similarly, though they cannot see others' beliefs and intentions, infants readily represent human actions as goal-directed and guided by subjective perceptions, and these abilities blossom into a reasonably sophisticated lay theory of mind by age 4. And finally, our lay biological intuitions help us decide what is safe to eat and what to run from before we get eaten ourselves. While lay theories of physics, psychology, and biology are imprecise and distinct from scientific theories, they are nonetheless useful for navigating the world. Our core knowledge equips us to readily intuit the invisible properties and causal schemas needed for these purposes.

Accordingly, errors in lay reasoning about physics primarily involve principles not strictly necessary for navigating the world, or phenomena that were absent from it until modern times (e.g., fast-moving airplanes). Even if our reasoning about the physical world is sometimes faulty, that does not imply that these lay theories are maladaptive in general. We avoid constantly bumping into walls or oncoming traffic for good reason: if all our ancestors had been so hopelessly incapable of judging the physical world, guessing others' intentions, or sensing danger in the environment, they would not have survived, and we would not be here today.

Are humans prepared to intuit economics in a similar way? And should they be? To help us answer these questions, let us consider a thought experiment: how our modern market economy might appear to visitors from another planet. Imagine that on their home planet, the population lives in small, nomadic groups with shared kinship. Their daily lives consist mainly of foraging and hunting for food, with little occupational specialization. Virtually everything they find is consumed immediately. They have few possessions beyond rudimentary tools that are portable and easily replaced. They distrust outsiders, so there is little trade between groups. The pace of technological innovation on this planet is much slower than on ours, and even small improvements can take thousands of years. Economic growth is so slow that

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

changes are imperceptible within a single lifetime. The amount of resources available for consumption thus appears fixed and unchanging, aside from periods of scarcity induced by natural shocks.

Would visitors from this world be prepared to intuit how modern global markets function in ours, or to grasp their benefits? Almost certainly not. But this is precisely the world our ancestors inhabited until very recently. Whereas the laws governing our physical world have remained mostly unchanged throughout human existence, our modern economic world looks drastically different from the one our ancestors faced. As we describe in the subsequent section, our ancestral past was devoid of any features or adaptive challenges that could have equipped us to understand modern markets. Unlike the innate physical, biological, and psychological intuitions that helped us develop and thrive throughout our ancient past, and still do today, we have no core economic knowledge.

2.3.1 | Ancestral societies vs. modern market societies

Humans evolved in small-scale Paleolithic hunter-gatherer societies. The adaptive challenges and selection pressures we faced in these ancestral environments shaped our psychology over millions of years. Our species lived under these conditions for roughly a thousand times longer than conditions of any other sort. Agriculture and other familiar markers of modernity began emerging only around 12,000 years ago, far too recently on an evolutionary time scale to have meaningfully shaped our cognitive architecture (Boyer & Petersen, 2018; Cosmides & Tooby 1997; Norenzayan et al., 2016; Rubin, 2003). Ancestral conditions were thus vastly different from those we face in modern market societies.

First, ancestral societies were small, and consisted mostly of tribal groups of up to 150 individuals bound by shared kinship (Norenzayan et al., 2016; Rubin, 2003). Interactions and economic exchanges were face-to-face and personal and mostly took place between familiar people with established relationships (Henrich et al., 2010). Second, for most of our ancestral past, these groups were nomadic and mobile: they immediately consumed nearly all the food they hunted and foraged each day, had few options for storing any surplus they generated (Kelly, 1995), and had few possessions beyond small, rudimentary items that required minimal labor to produce or replace (Woodburn, 1980).

The small population sizes of hunter-gatherer societies also allowed for little occupational specialization beyond dividing some tasks by gender or age (Brown, 1991; Kelly, 1995). The economic benefits of more extensive divisions of labor at larger scales remained largely unrealized until "sedentary" societies of greater size and complexity became more common, setting the stage for modern civilization (Kelly, 1995; Rubin, 2003). Until then, ancestral modes of production lacked any semblance of the extreme specialization of labor that defines today's global markets (Carneiro, 2000; Maynard Smith & Szathmary, 1999; Stiner et al., 1999).

Hunter-gatherer existence prevented any meaningful capital accumulation or forward-looking investment in productive technologies (Kelly, 1995; Woodburn, 1980). Small populations and limited specialization afforded societies little opportunity to assemble the diversity of talents and ways of thinking needed to generate innovative ideas (Jones, 2001; Kremer, 1993; Simon, 1996). Accordingly, even small technological advances (e.g., better techniques for manipulating stone) often took thousands of years (Gowlett, 1992; Rubin, 2003), and there was no perceptible economic growth or wealth creation within a human lifetime. Everyone lived and died in a world that appeared unchanging, with differences in resource availability or scarcity dictated by environmental shocks alone (Kremer, 1993).

These conditions differ vastly from the global scale and complexity of trade and specialization, impartial market exchange, widespread investment in productive capital and technology, and massive scale of production that characterize the modern marketplace. The unchanging zero-sum world we adapted to navigate bears little resemblance to the incredible pace of technological innovation, wealth creation, and economic growth we experience today. Table 1 summarizes these striking differences:

Of course, our evolutionary inheritance is not solely genetic, nor are our psychological intuitions solely innate: humans are cultural animals. A large body of evidence supports "dual inheritance theory," a framework describing the deep mutual influence and co-evolution of our cultural and cognitive capacities (Boyd & Richerson, 1985; Cavalli-Sforza & Feldman, 1981). Cultural norms and transmission mechanisms allowed human societies to adapt to environmental selection pressures dramatically faster than they could have through genetic adaptations alone and resulted in bodies of accumulated cultural knowledge that allowed societies to solve adaptive problems that no single member could on their own (Boyd et al., 2011; Henrich & McElreath, 2012; Sloman & Fernbach, 2017).

TABLE 1 Economically relevant dimensions of potential evolutionary mismatch.

Ancestral hunter-gatherer society	Modern market society
Small-scale tribal societies (~25–150 individuals)	Large-scale societies (millions of individuals)
Local exchange and limited division of labor	Global trade and highly specialized labor
No productive capital or investment	Capital investment and large-scale production
Zero growth or technological innovation	Rapid economic growth and innovation cycles
Wealth distribution	Wealth creation
Mobile lifestyle and portable possessions	Sedentary lifestyle and accumulation
Personal, partial reciprocity norms	Impersonal market transactions

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Accordingly, addressing the contribution of cultural norms to lay economic reasoning is no less essential.

2.3.2 | Cultural exchange norms vs. economic understanding

Given the rapid rate of adaptation to environmental changes they enable, why have not our cultural norms updated as we transitioned from ancestral societies to modern market-oriented societies? The short answer is that they have and in striking fashion. In fact, the evolution of social and cultural norms is exactly what enabled and established the conditions necessary for modern markets to emerge. Even today, there is tremendous variation across societies in the cultural norms surrounding economic exchange (Henrich et al., 2001; Norris & Inglehart, 2011). Yet that variation is by no means arbitrary, and exchange norms across cultures seem to share some key unifying features.

First, because human culture emerged in the same zero-sum ancestral settings, its origins reflect the adaptive problems present in these contexts, which often involved competing with other groups over scarce resources and allocating the amounts secured among one's own (Chinoy et al., 2023; Henrich, 2016; Norenzayan et al., 2016; Rubin, 2003). These problems prompted the development of norms to encourage individually costly cooperative behaviors for the benefit of the group, and to split rewards proportionally or equitably (Fiske, 1991; Henrich & Muthukrishna, 2021). Behaviors like free-riding or claiming more than one's share came directly at the expense of other group members in zero-sum settings, and hunter-gatherer societies likely experimented with a variety of norms, punishments, and social structures to discourage them (Graeber & Wengrow, 2021). But all were fundamentally routes to the same end: curbing selfish behavior to promote prosocial cooperation and group survival (Boyer & Petersen, 2018; Cosmides & Tooby, 1992; Delton et al., 2012).

Second, the development of new cultural norms played an essential role in the emergence and persistence of much larger and more complex human societies around 12,000 years ago (Norenzayan et al., 2016; Turchin et al., 2018). Up to that point, cooperative exchanges mostly took place within tribes or local coalitions where faces were familiar and reputations known (Boyer & Petersen, 2018). Exchanges with strangers beyond those spheres engendered mistrust and fear of exploitation (Bowles, 1998; Fehr & Henrich, 2003). Moreover, cultural adaptations that draw on existing social relationships (e.g., kinship, reciprocity, reputation, status) lose effectiveness quickly as group sizes expand and social ties and signals grow diffuse (Boyd & Richerson, 1988; Forge, 1972; Panchanathan & Boyd, 2003). Novel cultural adaptations were thus needed to sustain cooperative behavior of such unprecedented scale, intensity, and anonymity, and enable this rapid rise in societal complexity (Boyd et al., 2011; Henrich et al., 2010).

Historical, anthropological, and model-based evidence suggests that these adaptations included early forms of institutional punishments, organized religions, and marketplace norms we see today. In other words, such norms and institutions may reflect modernity precisely because they enabled cooperation, prosociality, and voluntary exchange to flourish at ever-greater levels of societal size and complexity (Boyd et al., 2011; Henrich et al., 2010; Norenzayan et al., 2016), setting the stage for today's vast societies and global markets. Specifically, these adaptations served to strengthen mechanisms related to punishment, monitoring, signaling, and reputation management. In doing so, they made it possible to sustain trust, fairness, and cooperation even in the anonymous, one-shot economic exchanges (i.e., between parties with no past or expected future interactions) that became more prevalent as communities grew larger.

Support for this possibility is just as evident today. For example, third parties are willing to incur costs to punish selfish and inequitable behavior in anonymous, one-shot economic games across a wide array of societies, and they exhibit greater fairness and altruism where stronger costly punishment norms are present (Henrich et al., 2006). Similarly, a variety of evidence suggests that religious beliefs in all-knowing, all-powerful, interventionist "Big Gods" in particular may have enabled human societies to "outsource" the monitoring and punishment of norm violations to supernatural agents, helping sustain cooperation, trust, and prosocial behavior at much larger scales than before (Norenzayan et al., 2016). These examples illustrate why our second point about the role of human culture is simply an extension of the first. The sorts of cultural adaptations that promote the success of large-scale or modern-day societies necessarily differ from those that were present in small-scale ancestral societies. Yet they serve to address the same adaptive problem: curbing selfish individual behavior and encouraging group-beneficial cooperation and prosociality (Henrich & Muthukrishna, 2021).

Third, cultural selection for "market norms" may be less about markets themselves, and more about what enables human prosociality and prosperity in the large-scale, complex, anonymous societies that were necessary precursors to the modern marketplace (Boyd et al., 2011; Henrich, 2009). In that sense, they may still reflect some of the conditions necessary for market-integrated societies to emerge even today. For example, in anonymous, one-shot economic games played by individuals from a wide range of pre- and post-industrial societies, those from larger-scale communities engage in more costly third-party punishment of inequitable behavior (Henrich et al., 2010). Similarly, market integration (i.e., the average percentage of household calories purchased in markets) is strongly associated with both greater third-party punishment and fairer allocative behavior (Henrich et al., 2001; Henrich et al., 2010). However, internalizing market norms is quite distinct from *understanding* markets or economic science! Humans frequently benefit from internalized norms without any clue about whether or why they are helpful (Henrich, 2016; Rand, 2016), as well as from technologies they fail to understand or unwittingly misunderstand (Harris et al., 2021; Henrich, 2021; Sloman & Fernbach, 2017).

Hence, there is little reason to expect that our evolved cultural norms will be any more helpful than our evolved cognitive capabilities in improving lay economic reasoning: they are meant to facilitate

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

cooperative exchange behavior rather than to promote economic understanding. It is entirely possible for lay economic reasoning to persist among those who have internalized market norms, live in highly market-oriented societies, and enjoy the benefits they provide on a daily basis. Moreover, these cultural adaptations may have been necessary conditions for the development of modern market societies, but they were far from sufficient. Even after large-scale civilizations and global trade routes began to appear, it took many millennia for the remaining pieces to fall into place. The emergence of modern global markets is thus astoundingly recent: their defining features, and the dramatic explosion in human wealth and prosperity they enabled (Clark & Feenstra, 2003; Maddison, 2007), are at most 200 years old!

Figure 1 below, reprinted from Clark (2007), illustrates the recency of this explosion in global income per person, and how dramatically it altered life even relative to the modern pre-industrial past.

Clark (2007) notes that while technological progress and economic growth did creep upwards during this modern pre-industrial era, they still failed to consistently outpace population growth. As late as 1800, the average English citizen was no better off than the average hunter-gatherer from 100,000 BC on observable welfare indicators like poverty, annual income, economic mobility, material consumption, dietary quality, and life expectancy. The modern marketplace has transformed every aspect of our lives, yet it is brand new not only on an evolutionary time scale but even on a modern historical one. Even if culturally transmitted norms could help promote widespread economic understanding, they have come nowhere close to keeping pace with the rapidity of this transformation.

3 | A SIMPLE MENTAL MODEL OF LAY ECONOMIC REASONING

Thus far, we have provided a clear basis for why lay economic reasoning should systematically deviate from economic science. First, our marketplace experiences are often misleading. And second, our economic world has changed so radically and so recently that our evolved cognitive capacities and cultural norms are not adapted to it, and provide us with little useful guidance.

Indeed, a variety of evidence consistently reveals systematic differences between the views of the lay public versus economic scientists. For instance, Bryan Caplan (2001, 2002, 2007) has written extensively about the 1996 Survey of Americans and Economists on the Economy (SAEE), which took a unique approach by surveying both a representative panel of the American public and professional economists on the same issues. The systematic gaps in their responses are robust to extensive controls, and cannot be explained by differences between the lay public and economists on demographic or socioeconomic characteristics, nor in educational attainment other than economic training.

They also appear orthogonal to political or ideological differences. Economists' responses followed no clear pattern (Caplan, 2002): they

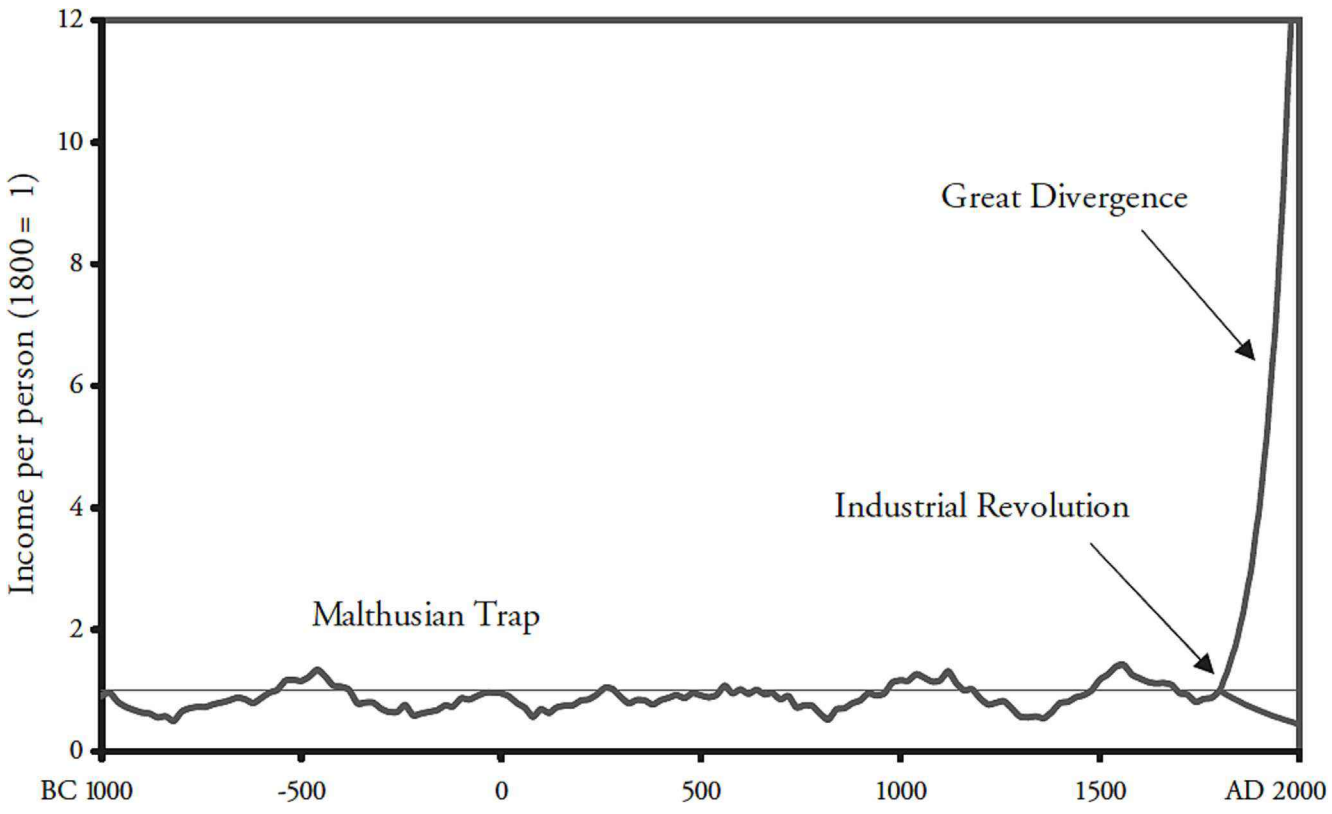

FIGURE 1 *The Recency of modern markets and modern prosperity.*

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

were more extreme than the most leftist non-economists in supporting many left-wing policies (e.g., less concerned about too many immigrants or too many welfare recipients), yet also more extreme than the most right-wing non-economists on many right-wing policy positions (e.g., less concerned about excessive business profits or tax breaks for businesses). The general public may greatly overestimate the extent of disagreement or ideological division among professional economists, yet overlook the many policy issues on which they show overwhelming agreement (Caplan, 2007). For instance, as we discuss in Section 4, there is a virtual consensus among economists of various political stripes that international trade is mutually beneficial, and that price control measures do not improve consumer welfare.

We argue that these discrepancies are not simply arbitrary or issue-specific, nor merely reflective of differing degrees of factual knowledge. Rather, lay theories of economics are based on different mental models of markets altogether, and proceed from different normative foundations and assumptions than those on which economic science is founded. Based on the common basis for lay economics discussed in the previous section, we propose that its many manifestations across various economic issues and policy domains can be characterized by a few defining features. In particular, we propose that lay economic reasoning tends to be *intuitive*, *moralized*, and *zero-sum*.

3.1 | Lay economics is intuitive

Describing lay economics as intuitive may seem circular: lay theories, by definition, do not rely on scientific observation. Here, we mean specifically that consumers rely on their firsthand experience of market transactions from their own egocentric perspectives, and apply simplifying heuristics to help make sense of its complexities.

The notion that lay reasoning privileges firsthand observation has been well-documented across a variety of contexts (Furnham, 1988). People are adept at weaving easily observable information into coherent narratives that help them understand the world (Cimpian & Salomon, 2014; Kahneman, 2011), and naturally evaluate market exchanges from their own egocentric reference points (cf. Berman et al., 2020). However, as noted in Section 2.2, firsthand observation from a consumer perspective may be fundamentally misleading, since it omits the unseen forces that are essential to fully understanding markets. There is no way to see the causal role of supply and demand in shaping prices. We lack the core economic knowledge needed to understand it, and we tend not to assume there is any relevant information beyond what we can observe or call to mind. For any topics on which we lack deep expertise, we act as if "what [we] see is all there is" (Kahneman, 2011, p. 86).

Intuitive reasoning is also characterized by the use of heuristics and simplistic mental models to cope with complex systems like markets (Kahneman, 2011; Legrenzi et al., 1993; Rozenblit & Keil, 2002). This often amounts to unwittingly substituting easier questions in place of more difficult ones (Kahneman & Frederick, 2002). For instance, while we cannot intuit the role of supply and demand, our psychology does readily equip us to spontaneously assume that outcomes are caused by intentions and desires. Accordingly, market actors may often be anthropomorphized (Aaker et al., 2010), and their intentions used as a heuristic to judge market outcomes (cf. Rosset, 2008; Spunt et al., 2015).

Finally, because people tend to selectively seek and encode information that confirms their intuitions or simplified mental models, they exhibit little awareness of anything they neglect (Einhorn & Hogarth, 1978; Keil, 2010; Klayman, 1995). Accordingly, repeated marketplace experiences may simply reinforce intuitive lay mental models rather than correcting them.

3.2 | Lay economic reasoning is moralized

The moralized nature of lay economic reasoning is best defined by the use of an *intention heuristic* to understand market outcomes (cf. Kling, 2023), whereby acting with good intentions is thought to be necessary to bring about market outcomes that are good for others. Hence, the intuitive nature of lay economics tends to manifest in the use of heuristics that are intrinsically moral in nature.

Moral assessments in many interpersonal contexts use the perceived intentions of others as a heuristic to judge the expected outcomes of their behaviors and facilitate social interaction (Fehr & Schmidt, 1999; Hertwig et al., 2013). In market contexts, good and bad intentions are defined in terms of selfishness versus prosociality: selfish intentions are assumed to correspond to market outcomes that harm others, and beneficial market outcomes are assumed to result only from generous intentions (Fiske et al., 2007; Goodwin et al., 2014; Koch et al., 2016). These findings also accord with our discussion in Section 2.3.1: the evolution of human morality is synonymous with the development of cultural norms that facilitated cooperation toward collective goals by deterring selfish individual behavior, thereby enabling better collective outcomes (Curry et al., 2019; Haidt, 2008; Henrich et al., 2010).

Notably, this has important implications for the way lay people understand the marketplace. The core idea of economic science is deeply counterintuitive: markets harness selfish individual intentions to produce good collective outcomes. No one clearly recognized this possibility until less than three centuries ago, when Adam Smith (1759) reminded us that we do not get our dinner solely due to the benevolence of the butcher, the brewer, and the baker. Though this idea is credited with essentially founding economic science, it has done little to allay doubts among the broader public about the very possibility that individuals' pursuit of self-interest can benefit society (Bhattacharjee et al., 2017).

The moralized nature of lay economics may also help explain why, relative to other sciences, people are more likely to believe that economic science is wrong when it contradicts their intuitions (Leiser & Shemesh, 2018). For many, how markets work is a question of values rather than factual understanding. And indeed, many economic issues are inherently moral in nature: the very reason markets exist is to guide allocations of limited resources that are efficient and fair and to

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

enable cooperative, mutually beneficial exchanges that can enhance collective wealth and welfare.

But while economic science regards the possibility that good societal outcomes can arise from self-interested behavior as an empirical question, the tendency to assume they cannot is a defining feature of lay economics. Notably, this appears to have been true throughout history: themes about the virtue of charity and the evils of selfishness and greed have been echoed in art, literature, and scripture for millennia across Eastern and Western cultures alike (Buss, 2015; Kuran, 2004; Ribstein, 2012).

3.3 | Lay economic reasoning is zero-sum

The zero-sum nature of lay economic reasoning is also closely tied to its basis in firsthand marketplace experience and moral intention heuristics. Economic science, for example, considers the incentive effects of prices on both buyers and sellers. In competitive markets, prices send a signal that directs consumers to which goods are scarce or abundant. For example, if oranges are scarce, their price will rise relative to other goods, encouraging conservation and substitution to relatively cheaper alternatives. Similarly, prices signal to sellers what consumers want most. Market competition compels firms to invest resources efficiently to offer either better prices or better quality to consumers. But as explained in Section 2, the forces that bring a product to a place and time at a specific price are invisible, while the zero-sum aspects of any exchange are readily apparent: the higher the price, the more surplus for the seller, and the lower the price, the more surplus for the buyer.

Moreover, humans evolved in a zero-sum world: nobody observed wealth increases or technological progress within their lifetimes. Exchange behaviors mostly consisted of allocating fixed amounts of resources (e.g., the fruits of collective hunting and gathering efforts) among group members, or making intertemporal exchanges to insure against misfortune and smooth consumption (Chinoy et al., 2023; Rubin, 2003). Different societies did try out different ways of allocating rewards proportionally or equitably (Graeber & Wengrow, 2021; Henrich & Muthukrishna, 2021). Nonetheless, given the limited specialization of labor and trade in these contexts, someone consistently ending up with more than others could often be better explained by theft or refusal to share than by having a unique and highly valued skillset, and was punished accordingly (Cosmides & Tooby, 1992; Rubin, 2003).

We thus expect that consumers' marketplace judgments will reflect assumptions that the world is still zero-sum. They may regard market exchanges as means of distributing fixed sums of surplus or resources, with the division of surplus dictating who wins and who loses (Baron et al., 2006; Davidai & Tepper, 2023; Johnson et al., 2022; Rubin, 2003). And they may view greater market rewards accrued by some as being taken directly from others who have less, rather than as being voluntarily given by others in exchange for the value they create.

3.4 | Where lay mental models diverge from expert economic perspectives

Since these proposed features of lay mental models are defined by their opposition to economic science, it may help to better specify the distinct assumptions underlying expert perspectives. First, economists do not simply consider individual exchanges in isolation. Their goal is to understand the interdependent outcomes experienced by all marketplace actors, including those not involved in a given exchange, under different sorts of market conditions (Leiser & Shemesh, 2018; Shiller, 2017).

Second, rather than assuming that market actors exhibit variation in selfish versus generous intentions, economic models tend to rely on the as-if assumption that individuals are motivated by self-interest and generally try to maximize their own economic outcomes. In this view, apparently generous intentions may simply reflect more farsighted selfish intentions: for instance, producers who offer consumers more generous divisions of surplus in the short run can earn more repeat business and enhance their reputations, ultimately helping them maximize their own outcomes in the long run. Accordingly, economic experts tend to focus on incentives rather than good versus bad intentions as explanations for marketplace behavior (Caplan, 2007; Leiser & Shemesh, 2018).

Third, economic analyses tend to treat exchanges as occurring voluntarily, and thus, as being mutually welfare-enhancing (Johnson et al., 2022; Mas-Colell et al., 1995). A party who does not expect to benefit from an exchange is free to opt out of it. Even behavioral economists and scholars who study suboptimal consumer choices assume that the existence of an exchange usually provides sufficient evidence that both parties expect to gain from it (Becker, 1962; Kahneman, 2003; Simon, 1955; Thaler, 1980). Notably, this assumption even applies to exchanges in which the sum of surplus appears fixed, as they can still be mutually beneficial in utility terms: even if a consumer could gain more surplus at the producers' expense if the price was lower, they still would not opt into the exchange at any price unless they expected to gain more utility from the purchased good than they expected to lose from the payment.

And fourth, economists do not simply evaluate prices based on their immediate distributive consequences within a single exchange. Instead, they regard them both as informative signals that reflect market conditions (e.g., supply and demand, the opportunity costs of both parties) and as incentives that guide the way marketplace actors choose to behave and allocate their resources (Caplan, 2007; Leiser & Shemesh, 2018; Sowell, 2004). These proposed divergences between lay and formal economic reasoning are summarized in Table 2.

The three proposed dimensions of lay economic reasoning outlined in Table 2 offer an initial basis for a variety of positive, testable predictions. For example, they suggest that consumers will tend to see firms' pricing decisions as discretionary and their profitability as indicative of the extent of their greed (see Section 4.2), naturally evaluate prices and wages in terms of their fairness but not their informational value (Sections 4.2 and 4.3), and attribute even price increases

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 2 *Features of lay economic reasoning* vs. *scientific economic perspectives.*

Lay economic reasoning	Economic science
Intuitive: Based on firsthand observation from an egocentric perspective	*Theory-driven*: Based on logical derivations from first principles and systematic observation
Moralized & Intention-focused: Assumption that good market outcomes require good intentions and that selfish intentions harm others	*Market Incentive-focused*: Assumption that selfish intentions can lead to good market outcomes when proper incentives are present
Zero-sum: Prices, wages, and taxes viewed as different means of allocating a fixed pie of resources	*Positive-sum*: Prices, wages, and taxes viewed as means of directing resources efficiently to enlarge the pie

driven by general trends (e.g., inflation, supply chain disruptions) to the greedy motives of individual firms (Section 4.4).

Moreover, these dimensions are more than mere descriptors. As explained in the preceding sections, they also represent differences along multiple dimensions of cognitive ease (e.g., accessibility vs. inaccessibility, visibility vs. invisibility, immediate vs. downstream consequences, intuitive simplicity vs. complexity) that collectively help explain why economic science is so counterintuitive and difficult to grasp. They also point to an additional set of testable predictions regarding the cognitive mechanisms that contribute to the appeal and persistence of lay economic reasoning.

Next, we outline the implications of this lay mental model across a wide array of market contexts and suggest how it can help explain a variety of well-established marketplace phenomena. Simply considering normative benchmarks from economic science may help consumer psychologists rethink existing literature that studies these phenomena and unlock novel insights about them.

4 | LAY BELIEFS ACROSS ECONOMIC FIELDS AND THEIR IMPLICATIONS FOR CONSUMER PSYCHOLOGY RESEARCH

The implicit normative assumptions underlying empirical research often shape the way it is conducted and how results are interpreted. So what might an understanding of lay normative economic assumptions, and their divergence from scholarly normative perspectives, mean for our interpretation of various marketplace phenomena and the consumer psychology literature examining them?

Table 3 below lays out a road map that categorizes areas of inquiry into lay reasoning across several economic subfields and market contexts. For each of these areas, we suggest some real-world marketplace phenomena that may be rooted in lay perspectives, briefly describe how lay thinking about these phenomena departs from scientific approaches, and outline some example implications of these departures for active literature within consumer psychology.

4.1 | Lay perspectives on trade

Voluntary trades are the building blocks of economic analysis. A foundational (if sometimes implicit) axiom of economic theory is that voluntary exchanges are mutually beneficial (Mas-Colell et al., 1995). As expressed by a leading consumer psychology textbook: "the idea that trade is always good is actually fairly obvious: if both parties were not better off, one or other would not be prepared to make the trade" (Blythe, 2013, p. 15). In other words, any agent's choice to take part in an exchange signals that they find it more valuable than their best available alternative. The very existence of a voluntary exchange thereby signals that it enhances welfare for both parties, even if one party benefits more.

4.1.1 | Doubting the mutual benefits of trade

Despite the disarmingly simple logic behind trades being win-win, lay consumers appear to perceive a substantial proportion of everyday economic transactions as win-lose (Johnson et al., 2022). In particular, they tend to believe that sellers are much more likely to benefit from these exchanges at the expense of buyers than the other way around. These beliefs appear partly rooted in "mercantilist" exchange intuitions, whereby consumers think that receiving money in an exchange enhances welfare more than receiving goods and services, contrary to the notion that "money is valuable only because it can be used to purchase valuable things" (Johnson et al., 2022, p. 3).

If lay consumers fail to fully recognize the utility they gain from their purchases, they might also see evidence of exploitation or outright deception by sellers in many exchanges that experts would consider mutually beneficial (Vohs et al., 2007). When is feeling duped sufficient to establish that a seller acted inappropriately, and what defines lay criteria for deception? There may be opportunities for consumer psychologists to better ascertain how such perceptions diverge from normative or legal definitions, which remains a challenge for regulatory agencies (cf. Akerlof & Shiller, 2015; Armstrong et al., 1979; Darke & Ritchie, 2007; Gao, 2008; Jacoby & Small, 1975; Russo Metcalf & Stephens, 1981).

On a similar note, do consumers regard such purchases as mistakes they regret, and would avoid if given the opportunity? Just as self-control failures can be better defined in terms of subjective regret rather than conflated with hedonic or indulgent choices (Vosgerau et al., 2020), there may be fundamental definitional questions here that affect the interpretation of established findings. For instance, do food marketing companies exploit consumers' self-control problems (Brownell & Horgen, 2004; Nestle, 2019; Schlosser, 2012), or do consumers hold others responsible for their own voluntary choices and subjective failures? Similarly, are consumers or producers to blame for the gulf between stated attitudes for ethically made products and their low market shares (Irwin & Naylor, 2009; Luchs et al., 2010; Trudel & Cotte, 2009; White et al., 2019)?

Normative assumptions that all trades are voluntary by definition might diverge sharply from lay perceptions of what makes a choice

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 3 *A categorization of lay beliefs by subfields of Economics & Consumer Psychology.*

Economic subfield	Phenomena	Divergence from economic principles	Relevant topics in consumer psychology
Trade	Win-win denial Protectionism Economic arguments for local consumption Politicized consumption	Neglect of comparative advantage; opportunity cost neglect; neglecting gains from voluntary trade; overvaluing money vs. goods; use of bargain heuristics to judge welfare gains and losses; neglecting economies of scale	Persuasion knowledge; preference and valuation; Locavorism; sustainable consumption; consumer ethnocentrism; politicized consumption; identity and ingroup effects; symbolic consumption and personal connections to producers; sacred values and authenticity; consumer activism
Industrial organization	Anti-profit beliefs Demand for price controls Overperception of monopoly	Neglecting incentive effects of prices; neglecting supply-side incentives and effects of competition; ignoring market constraints on producer choices; neglecting that supply & demand determine prices	Price fairness; market fairness; inequality; corporate personhood and anti-corporate sentiment; firm motives; inferences from firm size; CSR and authenticity; public policy judgments
Labor	Aversion to low-wage labor	Neglecting local market standards vs. egocentric market standards; opportunity cost neglect; neglecting gains from voluntary trade; neglecting that supply & demand determine wages	Wage fairness; market fairness; inequality; fair trade consumption; ethical consumption and CSR; price transparency; consumer activism
	Make-work bias/sysiphism	Efficiency neglect; ignoring productive outputs vs. labor inputs; belief in labor theory of value vs. subjective value and marginal utility; opportunity cost neglect; neglect of creative destruction	Aversion to automation; aversion to new technology and technological disruption; market fairness; public policy judgments
Macroeconomics	Economic pessimism	Neglect of productivity gains; efficiency neglect; neglecting welfare gains from economic growth; neglecting gains from voluntary trade; neglecting local market standards vs. egocentric standards; neglect of supply-side incentives	Money illusion; financial decision-making; price expectations; inequality; immigration and public policy judgments; politicized consumption; sustainable consumption and CSR; culture and sacred values

feel voluntary, subjective feelings of responsibility, or demand for market regulations (Cusimano et al., 2021; Ehrich & Irwin, 2005; Paharia, 2020). Similarly, rather than assuming consumers' choices reveal their "true" preferences and ignoring their stated preferences as "cheap talk" (Samuelson, 1938), conceptualizing such divergences in terms of consumers' willingness-to-pay (WTP) for their stated preferences might offer a more fruitful way for consumer psychologists to understand when they translate to purchase behavior and when they do not (cf. Gromet et al., 2013; Kristofferson et al., 2014; Trudel & Cotte, 2009).

Though WTP is assumed to capture consumers' subjective product valuations as a function of their unique preferences, resource constraints, and opportunity costs (Buchanan, 1978; Stringham, 2010), similar gaps might apply here as well. Recent work indicates a widespread aversion to the use of market allocation methods for goods and services that are viewed as basic needs (e.g., water, electricity, gasoline, internet, health treatments) for which there is little variation in preference across consumers (Isaac, 2023; Shaddy & Shah, 2022), as well as perceptions that WTP is unfair because it conflates signals of preference strength with available financial resources (Shaddy & Shah, 2018). Consumer psychology might benefit from further descriptive research on how lay perceptions of fundamental components and indicators of preferences, choices, and subjective valuations diverge from normative assumptions. Notably, recent findings also suggest that eliciting preferences via choices induces greater reliance on affect heuristics, whereas doing so via consumer WTP promotes more deliberative assessments of subjective value (O'Donnell & Evers, 2019), or ones that reflect expected market prices rather than individual preferences alone (Achtypi et al., 2021; Evangelidis et al., 2022). Further consumer psychology work along these lines may have important methodological and theoretical implications alike.

Notably, the sizable consumer psychology literature on price fairness has largely assessed fairness perceptions without explicitly specifying WTP or measuring inferences about it. Much of this work demonstrates that consumers are averse to prices that appear too high compared to the perceived costs of delivering products (Bearden et al., 2003; Bolton et al., 2003; Campbell, 1999; Kahneman et al., 1986), market prices (Thaler, 1985), or the prices paid by others

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

(Haws & Bearden, 2006), yet without addressing how it compares to their own WTP (or assumptions about others' WTP). Does "unfair" mean the same thing when referring to prices at which consumers would still consent to the exchange and derive a positive surplus from it, versus those they would actually refuse to pay? What do they assume about the WTPs of others who paid different prices, or about the division of surplus in these exchanges? Testing how fairness perceptions differ when WTP is elicited or provided as an additional reference point might offer useful clarifying insights.

Together with research demonstrating that lay people often overestimate others' WTP (Frederick, 2012; Jung et al., 2020), these findings also suggest the possibility that relative to consumers' own egocentric valuations, price discrepancies in either direction might drive perceptions of others' welfare gains or losses, fair or unfair treatment at the hand of sellers, or alternately, the judiciousness or moral acceptability of their spending (cf. Berman et al., 2020; Hagerty et al., 2022; Hagerty & Barasz, 2020; Olson et al., 2016). Further work may better clarify how zero-sum thinking, others' valuations, and attributions of responsibility relate. Such differences are also integral to the study of economic inequality and perceptions of how businesses account for it, which might also benefit from considering normative economic perspectives. Aversion to inequitable treatment or market outcomes is a powerful driver of marketplace judgments (Goya-Tocchetto & Payne, 2022; Ordabayeva & Lisjak, 2022), and lay consumers often regard practices like discriminatory pricing or differential service quality based on WTP differences as fundamentally unfair and immoral (DeCelles & Norton, 2016; Haws & Bearden, 2006).

However, economic experts regard price discrimination based on WTP as welfare-enhancing for *all* consumers: earning higher margins from upgraded services for wealthy consumers allows firms to accept thinner margins and serve poorer consumers than they otherwise could (Chintagunta et al., 2003; Choudhary et al., 2005; DellaVigna & Gentzkow, 2019). For instance, though lay people often find airlines' disparate treatment of first-class and economy-class passengers distasteful, forcing airlines to adopt uniform pricing would dramatically increase ticket prices beyond current economy-class rates, disproportionately harming poorer consumers who could no longer afford to fly. Similarly, though the desire to protect vulnerable consumers may result in greater scrutiny or perceived obligations to forgo profit for firms who serve them (Rotman et al., 2018; Xia et al., 2004), this may diminish firms' incentive to serve them (Bhattacharjee et al., 2017), potentially reducing the supply of goods and services to populations that are already underserved (Hill & Sharma, 2020; Martin & Paul Hill, 2012). Understanding how consumers' intuitive judgments are affected by making these potential trade-offs more salient may have important welfare implications.

And of course, zero-sum thinking also has important implications for public perceptions of trade between regions or countries, the core focus of trade economics. Among economic experts, the consensus that free trade (international or otherwise) is mutually beneficial and positive-sum is overwhelming and nearly universal (IGM Forum, 2012). The benefits of economic specialization and division of labor increase greatly with population size, and extending these practices to a global scale allows everyone to benefit from the wealth and efficiency gains that arise when production reflects the comparative advantages of countries, regions, organizations, and individuals around the world (Bastiat, 1845; Maynard Smith & Szathmary, 1999; Ricardo, 1817; Rubin, 2003). However, public perceptions of international trade are strikingly different: lay people tend to believe that importing cheaper foreign goods solely benefits the nations that export them while weakening domestic industry, overlooking the possibility that domestic consumers can also benefit from paying lower prices (Baron & Kemp, 2004; Caplan, 2002, 2007; Johnson et al., 2019; Roberts & Davidai, 2022).

Similarly, public views on immigration often reflect fears that immigrants will steal jobs from domestic workers, which overlooks that immigrants are also new consumers for domestic industry to serve (Esses et al., 2001; Louis et al., 2013). Zero-sum thinking may be especially rampant in these settings because international trade and immigration naturally activate intuitions that evolved to facilitate competition over scarce resources with foreign tribes or coalitions, as well as to deter free-riding within one's own (Boyer & Petersen, 2018; Davidai & Tepper, 2023; Hiscox, 2006). There is substantial public demand for protectionist policies from both the political left and the right, and American politicians on both sides of the spectrum have benefited from supporting populist anti-trade policies (Davidai & Ongis, 2019; Johnson et al., 2022). Given the increasing interest in sociopolitical activism and politicized consumption among consumer psychologists, the field may benefit from further research examining the psychological, intergenerational, and situational roots of such beliefs, as well as how they vary with issue framing (Chinoy et al., 2023; Davidai & Tepper, 2023).

4.1.2 | Tribal preferences

As with trade protectionism, consumption demand is often sensitive to tribal commitments or other forms of parochialism (cf. Baron et al., 2006), which is frequently justified by lay arguments for its economic benefits. Perhaps the most common manifestation is the strong consumer preference for goods and services that are produced and sold locally. For example, former and current U.S. Secretary of Agriculture Tom Vilsack (Washington Post, 2010) pronounced "In a perfect world, everything that was sold, everything that was purchased and consumed would be local, so the economy would receive the benefit of that." Many constituents agree, particularly with respect to agriculture: a 2012 poll found that 66% of those surveyed thought local food "helps local economies" (A.T. Kearney, 2013). Fine-dining restaurants increasingly source locally, and farm-to-school cafeteria programs are funded in 45 states (Lusk & Norwood, 2011). Similarly, lay economic reasoning tends not to favor the economic prospects of international trade. The SAEE mentioned in Section 3 found that the general public was decisively more negative about trade than professional economists: 54% thought that trade agreements with other countries cost the US jobs, while only 5% of economists agreed.

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Reviewing the literature on local food movements, Scharber and Dancs (2015) conclude that economic arguments in favor of local food (and we argue, buying local generally) typically cite the local multiplier effect: the notion that an additional dollar spent on local food will be spent by the farmer who receives it on other local goods and services, setting off a virtuous cycle of local economic wealth and job creation. Or, as Lusk and Norwood (2011) frame it: if we import goods from somewhere else, we are letting dollars out of our local economy and into theirs, making us poorer. This line of thought is generally rejected by economists, who instead stress comparative advantage, as described below.

The argument against exhorting people to buy locally recalls Bastiat's parable of the broken window. Local food, for example, is more expensive for most people most of the time. Anything more efficient to produce locally instead of elsewhere would already be cheaper than imports. And if so, exhorting people to buy locally would be unnecessary. Trade-offs between buying locally and buying cheaply arise only for products that can indeed be produced more efficiently elsewhere. For example, if a box of non-local strawberries costs $2 and local strawberries of the same quality cost $8, economists would argue that buying local destroys $6 in the same way that the broken window destroyed 6 francs. That is, a non-local buyer could enjoy the strawberries and also keep the $6 to spend on other things (perhaps locally).

But what if, following this logic, there was an area where nobody spent locally? That is, if everyone bought only non-local goods and spent any money they saved on more non-local goods, would their own area suffer economically? Economic science suggests, somewhat unintuitively, that such a situation could never actually arise in equilibrium. As Lusk and Norwood (2011) summarize:

> What if people in our city of Stillwater, Oklahoma kept spending dollars on "imports" from places other than Stillwater, and none of these dollars ended up being spent on Stillwater "exports?" Then, Stillwater would run low on money to buy even local goods and services. With less money chasing goods and services, prices in Stillwater would fall. This fall in prices would entice outsiders to buy Stillwater goods—and those sales to outsiders would be exports. Simultaneously, the extra dollars available outside Stillwater would cause outsiders to bid more for outside goods and services. Outside prices would rise, further discouraging people in Stillwater from "importing."

Rather than endorsing exclusively local production and consumption, economists stress the benefits of trade, and in particular, the principle of *comparative advantage*. Originally introduced by Ricardo, 1817), comparative advantage is the ability to produce a good at a lower opportunity cost than another producer (and potential trading partner). Opportunity costs refer to other ways the resources used to produce or obtain something could have been used, which remains unseen by observers. Comparative advantage holds that welfare increases if regions specialize in producing only those goods with the lowest opportunity costs, and trade with other regions to obtain those that would be higher-opportunity-cost to produce themselves. For example, it would not make much sense to cultivate bananas in the authors' home states of Colorado and Connecticut, because these states face clear natural disadvantages for growing them. It would be far more efficient for these states to produce something that better reflects their natural strengths to trade in exchange for bananas.

This example is extreme, but the rationale applies almost universally: for most things, there is at least somewhere else in the world where they could be produced at a lower opportunity cost. Moving from local self-sufficiency toward global specialization allows everyone to diversify their consumption and afford much more of it (Ridley, 2020). This notion runs afoul of local preferences and the logic that buying local has a multiplier effect that helps the local economy. Indeed, comparative advantage has proven so difficult to grasp that economist Paul Krugman, who won the Nobel Prize for contributions to the study of international trade, has called it "Ricardo's Difficult Idea" (Krugman, 2011).

Of course, economic considerations are not the only reason that people are encouraged to consume locally. Locavores also argue that local consumption has environmental benefits. Economists also tend to disagree with this argument for three reasons. The first is what we call the "miles per food illusion." Larrick and Soll (2008) point out how miles per gallon (MPG), typically used in the US, is a poor signal of environmental impact because people incorrectly believe that increases in MPG scale linearly into fuel savings. Such confusion could be eliminated by using the metric of gallons per mile. Relying solely on miles per food to assess environmental impactpresents a similar illusion.

Advocates of local consumption often highlight its environmental benefits by noting that it minimizes the number of miles that food must travel to reach them. But consider a farmer's market where all the sellers run local farms within a few miles of the market. Each drives to the market in a 2,500-pound vehicle carrying 500 pounds of produce, resulting in 2000 pounds of what economists refer to as deadweight loss in every trip. However, if we consider the total round-trip miles of all the sellers and divide it by the total amount of food, the food carried per mile might look considerably less impressive. Food from a larger, more distant farm might have to travel more miles, but the efficiencies gained from using a massive shipping container or a bigger truck to transport larger quantities might result in a much more favorable ratio of food per mile and actually reduce overall environmental impact. Counting miles per food without considering food per mile neglects the environmental benefits of such economies of scale.

Moreover, using miles per food as a proxy for environmental impact also overlooks that it is not only food that travels to the market: consumers do too. The greater the variety of food available in one place, which can be achieved far more efficiently by importing some of it, the less consumers have to travel to buy everything they need. Finally, and perhaps most importantly, economists also stress

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

the importance of comparative advantage in reducing overall environmental impact. The amount of resources needed to produce food, for example, often dwarfs the amount needed to transport it. Weber and Matthews (2008) find that transport accounts for only 4% of overall carbon emissions related to food in the U.S. In contrast, the additional resources required to cultivate crops where they do not naturally grow are likely to more than offset any transport cost savings, increasing their overall environmental footprint. The environmental extension of comparative advantage is that minimizing natural resource consumption almost always entails producing food in the lowest-cost location anyway, another reason we do not grow bananas in Colorado or Connecticut.

The applications of naive trade to consumer psychology are numerous. First, it can lend insight into so-called "locavorism," or the preference for buying local products, particularly food (Reich et al., 2018). If people do not understand comparative advantage, they may think that buying non-local products is wasteful in general. This thinking may also reflect our tribal ancestral past, and some researchers do indeed suggest that objections to trade reflect our innate xenophobic tendencies (Caplan, 2007; Rubin, 2003).

Second, lay beliefs about trade reveal heuristics about buying locally that may be interesting targets of study in themselves. For example, what makes a product local? This question seems simple, but given the many inputs into a product, the best way to define it may be quite unclear. For example, "local" milk in Hawaii is extracted from local cows but requires several inputs that are imported from long distances, so consumers may not be purchasing as locally as they think (Gupta & Makov, 2017). Similarly, Shinola received both consumer and regulatory pushback for its claims that its watches were made in Detroit. While the watches were assembled there, the components were manufactured internationally and imported. What "local" means to consumers is thus important and understudied. Similarly, if consumers fall prey to the "miles per food illusion" and miscalculate environmental impact just like they do with miles per gallon, a simple and interesting empirical question is whether metrics such as food per mile might lead to better decisions.

Finally, lay beliefs about trade are an interesting application of opportunity cost neglect. While opportunity cost neglect has been studied in other contexts (Frederick et al., 2009), little attention has been paid to how it might impact preferences for buying locally. Opportunity cost neglect has been shown to have small or no effects on personal consumption, but large effects on public policy preferences (Persson & Tinghög, 2020). We are not aware of any research, however, that directly examines the impact of opportunity cost neglect on a preference for local versus non-local consumption. As the intuitively compelling but economically unsound notion of local multiplier effects shows, a hallmark of lay thinking about trade is the lack of consideration of unseen opportunity costs and counterfactuals. Opportunity cost consideration may also be a necessary condition for understanding the highly unintuitive yet normatively crucial concept of comparative advantage, which explicitly invokes opportunity costs to illustrate mutual gains from trade, and which has been demonstrated to directly shape the extent to which lay people believe in those gains (Baron & Kemp, 2004).

Another increasingly common instantiation of tribalism in preference is politicized consumption. As political divides have widened in the developed world, firms have faced increasing consumer demands to engage in corporate sociopolitical activism (CSA), or public demonstrations of where they stand on partisan sociopolitical issues (Bhagwat et al., 2020; Hydock et al., 2020; Moorman, 2020). The impact of CSA on firm outcomes appears decidedly mixed. Whether it benefits firms depends on their market share and the proportion of existing and potential customers whose values align versus conflict with their partisan stance (Bhagwat et al., 2020; Hydock et al., 2020; Liaukonytė et al., 2023), in line with economic assumptions that any behaviors undertaken by market actors are likely to be at least partly (if not entirely) motivated by self-interest. The presence of salient market incentives or social rewards does indeed lead consumers to discount public displays of prosociality or moral value expressions by both individuals and firms (Berman et al., 2015; Lin-Healy & Small, 2012; McGraw et al., 2012; Newman & Cain, 2014). In line with the costly signaling framework in economics and other disciplines, such actions are regarded as reflective of authentic value-based motivations only when they entail demonstrable costs or material sacrifices (Bénabou & Tirole, 2006; Gneezy et al., 2012; Kirgios et al., 2020).

Many open questions remain about how to reconcile the demand for CSA with these findings, given how readily purportedly value-expressive firm behaviors of all sorts are discounted as strategically motivated and thus inauthentic. Consumer psychologists do indeed suggest that the perceived authenticity of CSA shapes its effects on firm profitability (Hydock et al., 2020; Mirzaei et al., 2022). But authentic compared to what? Opposition to CSA appears far stronger than opposition to charitable CSR initiatives that result in good societal outcomes (Hydock et al., 2020). Yet CSR campaigns themselves often backfire and provoke greater criticism than doing nothing at all (Newman & Cain, 2014), as they tend to be compared to the possibility of pursuing the same good outcomes selflessly. So what makes consumers actually suspend their disbelief and believe that CSA is sincere? Are CSA miscalculations that lead to monetary losses interpreted as costly signals of authentic firm motivation, or are firms regarded as both inauthentic and inept in these cases? Alternatively, might consumers realize that CSA is "cheap talk," yet still demand it due to instrumental motives of their own? For instance, if politicized consumption draws on cognitive architecture that evolved to facilitate coalitional identification and rivalry (Boyer & Petersen, 2018; Finkel et al., 2020), are demands for firms to engage in CSA about those firms at all, or just a convenient means of imposing "economic sanctions" to harm political opponents?

This possibility raises interesting questions about the normative implications of politicized consumption and tribal preference: what are its potential consequences, and what are the alternatives? Voluntary market exchange is fundamentally a cooperative act that is widely assumed to be positive-sum and mutually welfare-enhancing (Rubin, 2014), regardless of the actors involved. However, regular

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

cooperative exchange between geographically distant actors with opposing value systems is a very recent phenomenon enabled by modern markets and technologies (Boyer & Petersen, 2018; Rubin, 2003). Throughout early human history, it was more typical to cooperate only within small-scale human societies or coalitions organized around similar values and interests, and to engage in violent negative-sum conflict against those with competing values or interests (Bowles, 2009; Cosmides & Tooby, 2010). Just as our powerful moral and tribal motivations fueled such conflict between rival coalitions of early humans (Fiske & Rai, 2014; Slovic et al., 2020), the intuitive appeal of tribali consumer preferences today makes perfect sense.

But to the extent that regular trade and economic interdependence reduce the incidence of violent conflict and promote peace between opposing societies (Hegre et al., 2010; Lee & Pyun, 2016), the possibility of "amoral" market exchange may be important and underappreciated. Whereas humans evolved to feel stronger moral obligations to their own kin, communities, tribal groups, and coalitions than to strangers halfway across the globe (Baron, 2001; Boyer & Petersen, 2018; Cosmides & Tooby, 2010; Fiske, 1992), the normative foundation of economics is impartial and universalist. Accordingly, forms of corruption that privilege kinship or tribal loyalties above impartial formal laws also appear to be morally motivated and to serve relational needs and commitments that markets cannot (Muthukrishna et al., 2017; Rotondi & Stanca, 2015; Weisel & Shalvi, 2015). There may be common tribal roots to many marketplace phenomena that are currently seen as unrelated, and integrating these ideas from outside disciplines may present opportunities for consumer psychologists to enhance the richness and explanatory scope of the field.

4.2 | Lay perspectives on industrial organization

Industrial organization is the study of the strategic firm behavior and the dynamics of market competition. Lay reasoning about this area of economics is particularly relevant to consumer psychology because it shapes perceptions of one of the most observable and impactful strategic practices used by firms: pricing.

4.2.1 | Anti-profit beliefs

One defining feature of lay industrial organization is an anti-profit bias (Bhattacharjee et al., 2017; Caplan, 2007; Rubin, 2003), whereby consumers see prices as allocating wealth between sellers and buyers in a zero-sum fashion, while neglecting the incentive effects of prices that encourage both parties to behave in ways that grow the societal pie.

Surveys show that people greatly overestimate both the presence of monopolies and firms' profit margins. For example, the SAEEfound that the general public believed the average profit margin made by American corporations to be 46.7%, while the actual average that year was just 3%. Contrary to the economic characterization of prices being determined by structural market forces, people seem to think that most goods have "fair" prices that are substantially lower than observed prices (Bolton et al., 2003). Indeed, 75% of the general public thought the price of gasoline was "too high" on the SAEE, while only 7% of economists thought so. When asked whether the increase in gasoline prices was due to supply and demand versus oil companies trying to increase their profits (or both or neither), 85% of economists chose supply and demand, while 73% of the general public chose the profit motives of oil companies. And 46% of the public selected "business profits are too high" as a major reason why the economy was not doing better, compared to only 4% of economists. Consistent with these beliefs that markets are insufficiently competitive, people see more profitable firms as providing less value to society and expect firms that harm society to be more profitable (Bhattacharjee et al., 2017).

Why do lay people and economists see prices and profits differently? Again, much of the answer lies in what can be seen and what is unseen. To see why, it is helpful to consider the distinction between good and bad avenues to profit. Firms can indeed behave in ways that increase their profits without benefiting consumers. For example, a firm could try to erect barriers to entry for other would-be market participants by lobbying regulators, reducing the competition it faces. This firm could command higher prices for its products than it otherwise would, thus grabbing a larger share of the pie for itself. We call these "bad profits."

In competitive markets, making bad profits is not easy. Firms that overcharge or underdeliver on quality will quickly lose out to competitors with lower prices or better products. Sustaining or increasing profits thus requires offering something of value that competitors cannot. For example, firms that can produce something more efficiently and at a lower cost than others can offer lower prices. Firms might also develop new products, improve existing ones, or bring them to places where they were not available. All of these behaviors benefit consumers and society by either conserving resources or providing greater utility. They represent "good profits," and enlarge the societal pie while allowing firms to grab a share. Under competition, profit incentivizes firms to create value for consumers and society, thus benefiting everyone.

But as noted in Section 2, it is far easier to observe the allocative aspects of pricing—that is, how prices serve to divide the pie—than the incentives they create for sellers. Most of us experience market exchanges from the perspective of the buyer. Even when we sell something, we are usually reselling something we already have, like a used car or an item on eBay that we no longer need. In these situations, nothing new is created and the pie is not necessarily enlarged. We are simply dividing it with the buyer, and we are all too aware that we can profit more if we get away with charging more, even through deceptive means. In any such one-off transaction, the situation *is* zero-sum: a higher price means more surplus to the seller and less to the buyer.

However, what is true of one-off transactions does not hold for competitive markets on the whole. If a seller manages to command a large profit at a given price, other sellers can quickly jump in and undercut that price, or offer a better value proposition to prospective

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

buyers, to garner that profit for themselves. Prices that signal opportunities to profit thus attract competition, and the incentives they create for sellers have downstream effects that ultimately benefit buyers.

Because these incentive effects of prices cannot be observed in any particular exchange, however, and because the totality of forces that brings a particular product to a particular place at a particular time are invisible to buyers, they are neglected in lay beliefs about profit (Bhattacharjee et al., 2017). Experiencing exchanges and motivations from the consumer side means lay conceptions of markets differ from those of economists. Rather than asking "How do this seller's profits reflect the value they have created for me," consumers are more likely to ask "Would I be better off if this seller charged me less and made less profit?"

The invisibility of market forces extends beyond buyers alone, and even some sellers may not be fully aware of them. Consider a small retailer selling a novelty coffee mug. They might subjectively believe that they are making up its price for arbitrary reasons rather than taking the market-determined price. Upon reflection, however, this can only be true within certain limits. For example, the retailer will probably not ask $100 for the mug, since theirexperience tells them, at least implicitly, that it will not sell at that price. If the initial price they set is indeed too high, they will likely reduce it until it is sold. Similarly, they will probably not charge less than the wholesale price of the mug, which would simply lose them money. That wholesale price, in turn, reflects the value of producing the mug, given the complex opportunity costs of both the manufacturer and the retailer. These are hard constraints on pricing created by market forces, even if the retailer does not see perceive them as such or explicitly consider them. Hence, both buyers and sellers might behave in accordance with economic models without actually realizing it.

Lay theories of industrial organization have several implications for consumer psychology. First, they can help us understand consumer perceptions of price fairness. If people implicitly believe that prices are dictated by firms rather than determined by market forces, they may be suspicious that firms are capturing too much surplus by charging overly high prices (Bolton et al., 2003; Campbell, 1999; Kahneman et al., 1986; Vohs et al., 2007). Reactions to price discrimination may be particularly negative (Haws & Bearden, 2006; Xia et al., 2004), despite the welfare benefits it can offer by creating economies of scale and making it possible to offer lower prices to poorer consumers (Chintagunta et al., 2003; DellaVigna & Gentzkow, 2019). Lay perceptions that firms are unconstrained price-makers may extend to these situations, as if firms are free to arbitrarily charge different prices to different consumers for the exact same product under the same terms of exchange. Exploring what makes consumers consider market constraints on firm behavior might offer novel theoretical and practical insights.

Lay theories of industrial organization can also help us better understand the phenomena of firm stereotypes and brand personalities. If consumers think the path to profitability entails overcharging or cutting costs by reducing quality, it makes sense that successful firms are seen as lacking in warmth but high in competence for demonstrating the willingness and ability to do so (Aaker et al., 2010). These inferences about marketplace success extend to research on consumer perceptions of large firms. If consumers believe that becoming a large firm simply involves being more willing than others to extract value from consumers, they will see larger firms as having stronger profit motives and as being less ethical than smaller firms (Caplan, 2007; Freund et al., 2023). Similarly, this perceived lack of intrinsic motivation and exclusive focus on pursuing profit may also lead consumers to judge products from large firms as being lower in quality, unless those products are technical enough to require the greater financial resources available to these firms (Woolley et al., 2023). Additional research on factors that make consumers aware that firms in competitive markets must succeed by creating more value than others could enhance our understanding of effective firm communication and brand management.

4.2.2 | Distrust of markets and demand for regulation

Lay neglect of the economic functions and incentive effects of prices may also play a central role in shaping public policy choices and demands for market regulation. From an economic perspective, prices are essential to solving the core economic problem facing human societies (Coyne et al., 2015): how can scarce, limited resources be allocated to best serve the unlimited needs and wants of as many people as possible? At a global level, how can societies simultaneously incorporate the idiosyncratic needs and wants of billions of individuals around the world, as well as consider the scarcity and abundance of any and all available resources, and do so continuously as these inputs change over time? This is a problem of staggering complexity that requires the utilization of the dispersed, decentralized knowledge in the heads of every individual involved, each of whom knows their own needs, opportunity costs, and local conditions better than anyone else. And this is precisely the problem that markets are designed to solve, by virtue of the information summarized in market signals like prices, wages, and profits (Lavoie, 1994; Sowell, 1980; Thomsen, 1992; von Mises, 1920). As most famously articulated by the Nobel Laureate Friedrich Hayek (1945):

> If we can agree that the economic problem of society is mainly one of rapid adaptation to changes in the particular circumstances of time and place, it would seem to follow that the ultimate decisions must be left to the people who are familiar with these circumstances, who know directly of the relevant changes and of the resources immediately available to meet them. … We must look at the price system as such a mechanism for communicating information if we want to understand its real function.

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

> … The marvel is that in a case like that of a scarcity of one raw material, without an order being issued, without more than perhaps a handful of people knowing the cause, tens of thousands of people whose identity could not be ascertained by months of investigation, are made to use the material or its products more sparingly; i.e., they move in the right direction.

Accordingly, the role of price signals is especially crucial because markets are dynamic: supply and demand for various goods and services change constantly (and sometimes rapidly) as a function of technological advances, competitive dynamics within industries, resource availability and environmental influences, and cultural and political shifts.

For instance, when Hurricane Fran struck Raleigh, North Carolina in 1996, damaging hundreds of homes, felling trees and blocking dozens of roads, and leaving millions without power to refrigerate food, infant formula, insulin, and other daily necessities, demand for goods like ice, chain saws, generators, and lumber immediately skyrocketed (Munger, 2007; Zwolinski, 2008). The limited supplies in the area sold out in minutes, and blocked roads made it nearly impossible to leave and seek more elsewhere, resulting in a desperate shortage. At the same time, several surrounding areas suddenly found themselves with a massive surplus of these supplies after stocking up before the storm but being left unscathed when it unexpectedly changed course. Four enterprising young men from these surrounding areas decided to rent two freezer trucks, stock each one with 500 bags of ice bought at $1.70 apiece, use chainsaws to clear roads leading to the disaster area in Raleigh where supplies were most urgently needed and resell the ice there for $12 per bag to cover their expenses and turn a profit. Long lines quickly formed, and while a few buyers expressed anger over the inflated prices, not a single one of them refused to pay or chose to forgo purchasing ice. However, this enterprise was short-lived. The sellers' behavior is a classic example of "price gouging," a practice widely regarded as immoral by the lay public, and one legally prohibited in North Carolina and most other U.S. states (Zwolinski, 2008). The four men were soon arrested and charged a hefty fine, while their remaining ice was seized and never distributed to the throng of buyers in need (Munger, 2007).

From a normative economic perspective, the enforcement of this anti-gouging law prevented hundreds of potential voluntary exchanges with win-win outcomes from taking place and effectively forced lose-lose outcomes on these buyers and sellers instead. That is, buyers' willingness to pay these higher prices indicates that they still expected buying the ice to enhance their welfare. The drastic increase in the market price of ice signals how urgently it was needed during this supply shortage, and thus how much value could be created by supplying it. Crucially, the potential to charge those higher prices and earn higher profits is also what incentivized new suppliers to invest in entering the market to help alleviate the ice shortage and satisfy the enormous excess demand for it. Economic experts emphasize the importance of price signals in incentivizing producers to supply scarce goods and resources where they are most valued, and thereby tend not to support price control policies that prevent prices from varying freely, distort supply-side incentives, and thereby risk exacerbating the problems they intend to solve (Caplan, 2007; Coyne et al., 2015; Hayek, 1945; Rubin, 2003). A poll of leading economists found that 77% of their confidence-weighted judgments disagreed that banning price gouging in the wake of natural disasters would actually improve consumer welfare, while only 7% agreed (IGM Poll, 2022).

Such expert concerns are by no means restricted to emergencies and apply to price control measures across countless contexts. For instance, when the Argentinian government set a maximum price on milk in 1959 to ensure that poor families could afford it, many producers could no longer operate profitably and shifted resources away from milk production toward other goods, inducing a national shortage (von Mises, 1995). Price ceilings on staple foods, commodities, and petroleum products have led to similar shortages and necessitated rationing in dozens of countries around the world (Aksoy & Ng, 2010; Clements et al., 2007; Guenette, 2020; Morton, 2001). Capping the prices of crucially-needed pharmaceutical drugs leads firms to divert resources away from producing more of them or investing in research to improve them, deters potential new entrants who might have applied competitive pressure and offered consumers more choices, and thereby limits the availability and quality of those drugs in the long run (Chakraborti & Roberts, 2023; Coyne et al., 2015; Trujillo et al., 2020). In cities where affordable housing is scarce, rent control laws make it much less profitable for real estate developers to invest in building new housing, thus preventing expansions to the housing supply that could improve rental availability and drive down prices (Diamond et al., 2019; Friedman & Stigler, 1946). Most economic experts regard these policies as counterproductive and emphasize the risks of crippling market pricing mechanisms.

However, the widespread popularity of price controls suggests that the lay public views them very differently. First, it supports the notion that instead of seeing prices as informative and mostly market-determined, consumers view them as arbitrary, set at the discretion of sellers, and constrained by little beyond the extent of their selfishness versus generosity. Economists tend not to assume that prices are inherently problematic unless there is reason to believe they did not arise from genuine value creation (e.g., a market failure or monopoly; Caplan, 2002), and might regard a price increase from $1.75 to $12 as an indication of just how dramatically the "true" value of ice has gone up due to hurricane damage. In contrast, lay consumers are more likely to regard the $1.75 reference price as the fair or "correct" one (Bolton et al., 2003; Kahneman et al., 1986), and explain the increase as caused by the sellers' greed alone (Bhattacharjee et al., 2017).

Second, it also supports our proposition that lay people largely neglect market dynamics, such as the incentive effects that market prices and profits exert on current and potential producers' decisions about whether to supply more or less of a given product, which market opportunities or product development projects to invest in or avoid, and which markets to enter or exit. All of these effects are complex, indirect, and entirely invisible (Baron et al., 2006; Bhattacharjee

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

et al., 2017; Diehl & Sterman, 1995; McCaffery & Baron, 2006), and understanding how market restrictions might disrupt them requires considering unrealized counterfactual outcomes (e.g., how much more rental housing would have been built in the absence of rent control laws?). Moreover, *supply-side* market dynamics of this nature may be particularly inaccessible to lay judgments made from a consumer perspective (cf. Leiser & Halachmi, 2006; Levitt, 2007; Thompson & Siegler, 2000). Hence, to the extent that lay mental models focus primarily on the fairness of immediate distributive outcomes, price control policies may seem both morally imperative and relatively costless.

Notably, the sizable literature on perceptions of price fairness appears to neglect market dynamics and price signaling mechanisms as well. Much of this literature has been directly shaped by Kahneman et al.'s (1986) seminal work on dual entitlement theory, which documents lay reactions to discretionary decisions to change prices or wages from their prior reference levels in isolated market exchanges. But it does not address lay beliefs about those reference prices or wages were initially determined, whether decisions to change them are constrained by market competition or the opportunity costs of both parties, or whether they affect the incentives and behaviors of market actors outside the focal exchange. Consequently, consumer psychology research says a great deal about the factors that drive lay consumers' judgments of price fairness, but virtually nothing about any relevant economic factors they neglect. Our field may thus be blind to whether, when, or why neglecting these inputs might matter. Simply considering normative economic perspectives alongside descriptive lay fairness judgments may present a wealth of opportunities to enrich our understanding of these phenomena.

4.3 | Lay perceptions of labor

As rising prosperity in the developed world has increased consumer activism and ethical consumption, public demand for transparency regarding firms' labor practices and wages has increased as well (Fernandes, 2020; Peloza et al., 2013; Powell & Zwolinski, 2012; Trudel & Cotte, 2009; Tully & Winer, 2014). But how do lay consumers actually react to information about firm labor practices?

4.3.1 | Zero-sum thinking and wage inequality

Perhaps the most notable target of consumer advocacy for ethical labor practices is multinational firms' reliance on labor from impoverished regions in the developing world (Ehrich & Irwin, 2005; Paharia et al., 2013; Reczek et al., 2018). Workers in these regions freely consent to work conditions that are entirely unacceptable by developed-world standards, such as comparatively meager wages, long hours, and poor safety standards. Accordingly, firms in highly competitive industries like apparel manufacturing can dramatically reduce their labor costs and increase their profits by employing them.

Governments in developing countries typically lack the resources to guarantee living wages or pleasant work conditions, and workers with insufficient education, skills, and infrastructure rarely achieve the levels of productivity needed to command them (Arnold & Bowie, 2003; Hall & Leeson, 2007). In light of these existing inequalities, even the *best* jobs in these regions (e.g., those paying "Fair Trade" wages) inevitably fall short of developed-world standards. Lay condemnation of these labor practices is nearly universal: since the 1990s, prominent brands like Nike, H&M, Forever 21, Gap, Adidas, Victoria's Secret, and Disney have been subjected to scathing criticisms from consumers, global media, advocacy groups, and political leaders over their use of low-wage "sweatshop" labor (Phau et al., 2015).

From a normative economic perspective, *any* jobs that these workers voluntarily accept are assumed to be mutually welfare-enhancing and more attractive than their best available alternatives, even if the distribution of surplus is unequal, and even if there are more attractive opportunities in wealthier parts of the world that they cannot access. Workers' choices and trade-offs are assumed to be informed by their own understanding of their *local* labor market conditions, opportunity costs (i.e., the other job options actually available to them), abilities, and idiosyncratic tastes (Powell, 2014; Stringham, 2010). Empirical evidence from developing economies supports these assumptions: factories operated by multinational firms typically offer better wages and conditions than domestic factories in these regions, let alone the grueling alternatives to these factory jobs, such as agricultural day labor or scavenging in landfills (Aitken et al., 1996; Brown et al., 2003; Kristof, 2009). Perhaps most revealingly, an analysis of wages highlighted as shamefully low by anti-sweatshop campaigns found that they still exceeded the average income in nine of the 11 developing countries examined, even excluding non-monetary benefits like health care and meals (Powell & Skarbek, 2006). Accordingly, such factory jobs are coveted by workers, and there is substantial excess demand for them.

Consistent with these findings, Indian respondents feel quite favorably toward multinational firms' labor practices in impoverished parts of India: they judge them to be fair, morally acceptable, and decidedly beneficial to worker welfare, and thus support policies that would increase the availability of such factory jobs. In contrast, American consumers, who report far less familiarity with local market conditions and worker opportunity costs in India, regard these same labor practices as unfair, immoral, and *detrimental* to worker welfare, and instead favor policies that would force these factories to close (Bhattacharjee & Paolacci, 2023). They tend to see these voluntary exchanges as zero-sum, neglect workers' local opportunity costs, and evaluate their wages and work conditions by egocentric standards from developed-world labor markets (cf. Berman et al., 2020; Epley et al., 2004; Van Boven et al., 2000). Accordingly, they deem these exchanges to be morally unacceptable even when their terms far exceed local market standards in the developing world. Western European shoppers in a field retail setting thus prefer the store to manufacture apparel in wealthy developed regions where workers earn higher market rates over poor developing regions where market rates are lower, but these preferences attenuate when they are

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

explicitly prompted to consider the alternative job options available to both sets of workers.

Lay neglect of employer opportunity costs also affects consequential choices: viewing labor information leads American consumers to avoid buying from firms who manufacture in impoverished regions versus those who manufacture in wealthy regions, even if both simply pay at local market rates. And they prefer to make consequential donations in support of radical activist campaigns that would quintuple the wages of developing-world workers over campaigns promoting incremental wage improvements to preserve jobs. This tendency attenuates when they are explicitly prompted to consider which of these campaigns would be more likely to induce employers to lay off workers and move production elsewhere (Bhattacharjee & Paolacci, 2023).

Lay perspectives on labor thus diverge sharply from the views of economists and development scholars who caution against extreme forms of activism that might threaten the availability of factory employment in the developing world. For instance, the FAQ section of Oxfam's "What She Makes" campaign website specifically warns supporters that "Oxfam does not advocate boycotts, as this may result in workers losing their jobs." Other advocates also note that efforts to improve wages and conditions that risk reducing employment in the developing world may deprive disadvantaged workers of their best route out of poverty (Kristof, 2009; Powell, 2014; Sachs, 2005; Zwolinski, 2007), and warn that "bad jobs are better than no jobs at all" (Krugman, 1997). In line with these concerns, American-led anti-sweatshop activism that used the threat of economic sanctions to pressure the Indonesian government to double the real minimum wage between 1989 and 1996 led many multinational firms to close their factories there. Even among those who kept their factories running, wages increased by 67.5% for 65% of workers, but at the cost of job losses and sustained unemployment for the rest (Harrison & Scorse, 2010; Powell, 2014).

The desire to improve wages and conditions in developing regions is nearly universal. Yet it seems important to understand whether lay perceptions of ethical labor practices conflict with the preferences of low-wage workers themselves, neglect their local opportunity costs, or fuel consumer activism likely to produce welfare trade-offs for those workers (Bhattacharjee & Paolacci, 2023). For instance, is it really more virtuous to hire workers from wealthy developed markets and bar impoverished developing-world workers from access to global markets? The egocentric standards applied by lay consumers reflect what they can expect and demand in developed markets with strong labor protections in place. However, standards of acceptability may be vastly different in places without the same resources or government capabilities.

Indeed, empirical work in labor economics finds that the presence of labor protections like living wage guarantees or workplace safety regulations are a virtual proxy for wealth, and entail trade-offs to individual income and national growth (Hall & Leeson, 2007). Looking back at the history of highly developed nations makes clear that they initially prioritized rapid growth and wealth creation without these regulations in place, and only implemented them once they were wealthy enough to afford the trade-offs. Currently developing economies still lack the resources and ability to enforce them, and simply implementing labor standards from developed markets may involve welfare trade-offs that developing populations are unwilling to incur (Hall & Leeson, 2007).

For instance, a study of Guatemalan factory workers found that over 90% were unwilling to accept even minimal pay reductions for more pleasant or safer working conditions (Clark & Powell, 2013). Although feelings of objectivity and universal applicability are a defining feature of such standards of moral acceptability (Skitka, 2010), they resemble luxury goods that not all individuals or nations can afford: we in the developed world are willing to pay far more for pleasant workplace conditions than impoverished workers with unmet basic needs. Research in consumer psychology has largely examined lay perceptions of immoral versus ethical labor practices in isolation (Ehrich & Irwin, 2005; Luchs et al., 2010; Paharia et al., 2013; Reczek et al., 2018; Sen & Bhattacharya, 2001). But comparing them to normative benchmarks, or making consumers aware of potential welfare trade-offs, might unlock new insights, reveal additional practical implications, and facilitate interdisciplinary impact.

Similarly, consumer psychologists have documented how lay consumers perceive measures like CEO-to-average-worker pay ratios as indicators of firms' commitment to fair compensation and egalitarian values (Kiatpongsan & Norton, 2014; Mohan et al., 2018), often without considering normative economic benchmarks. But do such pay ratios really capture firms' egalitarian values and intentions alone? This view reflects zero-sum lay perceptions that total firm compensation is a fixed amount that is allocated among different employees based solely on the selfishness or generosity of firm leadership.

However, from an expert economic perspective, firms are made up of employees with different skill sets playing different sorts of roles: each type of position represents a separate labor market that includes all potential employees and employers, with labor supply and demand in each of them determining compensation. For instance, consider a small tech company run by an inexperienced CEO that employs a few dozen highly skilled software developers and computer scientists, compared to a large multinational firm run by a celebrity CEO that employs thousands of unskilled retail workers: the pay ratio of the first firm will invariably be far lower than the second. But is that really because its leaders are more virtuous or less selfish than those of the second, or just because the abilities of their respective employees and CEOs were determined to be differentially valuable, given labor supply and demand?

The same applies to lay perceptions of other unequal market outcomes, such as gender wage gaps at the firm or societal level (Schlager et al., 2021). From a normative perspective, such aggregate disparities cannot be assumed to reflect sexist versus egalitarian intentions alone without ruling out other potential explanations, such as adjusting to account for differences in the types of positions occupied by men and women, their full-time versus part-time status, the demand for the skillsets they require and the supply of candidates who possess them, and so on (Goldin, 2014).

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Even if these occupational choices themselves reflect differences in opportunity or historical sexism, making adjusted comparisons of this sort can be informative. For instance, they can reveal why gender gaps emerge even for firms whose pay is determined by explicitly gender-blind algorithms (e.g., Uber) due to gender differences in driver behavior (Cook et al., 2021), or which particular institutional mechanisms and policies appear unbiased, biased against women, or biased in their favor (Ceci et al., 2023; Goldin, 2014). While documenting lay perceptions that unequal aggregate market outcomes offer sufficient evidence of intentional discrimination is valuable in itself, using theoretical and empirical normative benchmarks to make different sorts of apples-to-apples comparisons could enable consumer psychologists to better identify how lay people perceive various contributors and potential solutions to wage inequality (cf. Jachimowicz et al., 2022).

4.3.2 | Aversion to labor-saving technologies

Another defining feature of lay beliefs about labor is what Caplan (2007) calls a "make-work" bias or what Bastiat (2011) referred to as "Sisyphism" (after the mythological figure whose punishment in Hades was to eternally push a rock up a hill only to have it roll back down). Simply put, lay perspectives on labor seem to assume that firms benefit society primarily by creating as many jobs as possible, rather than producing valuable outputs as efficiently as possible.

In the 19th century, Bastiat penned a satirical essay in which candlemakers petitioned the government to block out the sun to increase employment. His intention was to ridicule widespread public beliefs that technologies that save labor and increase productivity are economically harmful in general because they put people out of work. Such beliefs are not just a relic of centuries past. Consider a 2014 article for CNBC entitled "Oil Below $80: Why that's bad news" (Pisani, 2014). In the few years preceding, oil prices had consistently been far north of $100 per barrel. Given that a fall in fuel prices means cheaper gasoline prices, cheaper transportation and production costs, and thus cheaper prices for many everyday goods, one might have thought this trend would be well-received. So why was it bad news? The simple answer: jobs. If falling prices make expensive means of oil extraction unprofitable, they might be abandoned, reducing demand for labor in the industry. Even if these prices provided a clear signal that oil was not scarce enough to warrant using the most expensive and environmentally harmful methods of extraction, the business media felt that paying people to keep using them would be better for everyone than directing their labor elsewhere towards more valuable uses.

By the logic of preserving jobs, the invention of the internal combustion engine was an economic disaster. The emergence of the automobile in the 20th century led to the replacement of carriage and harness makers (numbering 109,000 in 1900) and blacksmiths (238,000 in 1910) in the US. Today, these professions are nearly obsolete. Modern shipping containers have made the loading and unloading of cargo (once a very dangerous endeavor) much easier, leading to more efficient shipping. But they also mean many fewer dock workers are needed. Even the polio vaccine eliminated most jobs for manufacturers and attendants of iron lungs (for more examples, see Cox & Alm, 1992).

An analysis of the SAEE shows that the lay public is far more concerned with preserving jobs than economists. As noted in Section 4.1.2, the general public is much more likely to think that international trade agreements reduce domestic employment. They are also much more concerned about labor replacement: 46% of the general public rated "technology is displacing workers" as a major reason why the economy was not doing better, while only 2% of economists thought so. Lay people also seem to care more about preserving jobs than preparing for and creating new ones: when presented with a list of 11 reasons and asked which was the most important reason the economy was not doing better, 42% of economists chose "education and job training are inadequate," while only 14% of the general public did. Concerns that job losses due to new technology will hurt the overall economy may neglect the benefits of "creative destruction," a hugely influential concept popularized by the economist Joseph Schumpeter (1942, p. 83):

> The opening up of new markets, foreign or domestic, and the organizational development from the craft shop to such concerns as U.S. Steel illustrate the same process of industrial mutation—if I may use that biological term—that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one. This process of Creative Destruction is the essential fact about capitalism.

Indeed, technological progress in a market economy means that some jobs will become obsolete, and some firms and entire industries will disappear. But the consequences are not all bad. Over time, creative destruction makes societies more productive and richer, improves the quality and availability of goods and services, and ultimately raises living standards for everyone (Cox & Alm, 1992). At the turn of the 20th century, 40% of the US population worked in food production. Today, that figure is less than 2%. That does not mean that 38% of the US population has remained persistently unemployed throughout the last century, nor that we produce too little food. Technological advances have simply made us far more efficient at producing food with less labor and fewer resources (in fact, even as the number of American mouths to feed has grown considerably, food has only become more abundant). That, in turn, has made surplus labor and resources available to reallocate to other tasks that add value to society in new ways.

Indeed, the economist Paul Romer (1990) won the Nobel Prize for defining technological advance as new knowledge that increases the efficiency of human labor (i.e., reducing the human effort and labor required to produce a given output) and demonstrating that incentivizing investments in such advances may be the most central means by which markets improve societal welfare. In other words, from an expert economic perspective, the very definition of

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

technological progress—from simple tools all the way to AI—is the development of knowledge and innovations that save human labor.

However, lay people neglect the importance of supply-side incentives to make forward-looking investments in such advances (Bhattacharjee et al., 2017), and also regard human effort and labor as key inputs to their judgments of market fairness and deservingness of market rewards (Inzlicht et al., 2018; Olivola & Shafir, 2013). They tend to overlook the past fixed-cost investments needed to develop novel labor-saving technologies, which are invisible when observing present market conditions in isolation (Shaddy et al., 2022). Instead, they evaluate the fairness of market outcomes based largely on visible differences in variable labor or raw material costs (Bolton et al., 2003). Accordingly, they often regard new technologies as providing unfair competitive advantages in the present, and express support for policies that seek to restrict technological progress to protect incumbent producers in the present (Shaddy et al., 2022).

Notably, lay judgments thus overlook the potential for disruptive present technologies to provide enduring societal benefits after they are widely adopted by incumbents and free up human labor to reallocate elsewhere (Aghion & Howitt, 1992; Autor, 2015; Romer, 1990), perhaps because these benefits remain uncertain and unseen until actually realized. The societal costs of slowing innovation to prop up incumbents cannot be observed either and can be appreciated only by considering unseen counterfactuals. Accordingly, the long-term societal benefits of technological innovation might be most apparent when looking back at past disruptions throughout history: Johannes Gutenberg's invention of the printing press in the 15th century prompted petitions to the Senate to ban this technology that might otherwise "[drive] honest Italian scribes out of work" (Eisenstein, 2005, p. 322), but it seems doubtful that the lay public thinks the world would be better off today if those petitions had succeeded.

Fast forwarding to the present, the recent rise of emerging technologies like AI, large language models, and driverless cars is once again prompting debates about the existential threat they pose to future employment and our way of life. Notably, consumer psychology research has tended to examine aversion to such disruptions based on the idiosyncratic features of specific technologies like algorithms or AI (Dietvorst et al., 2015; Logg et al., 2019; Longoni et al., 2019). But while lay perceptions of these features may be important to understand, exclusively examining individual technologies in isolation might obscure why cycles of technological panic and acceptance recur so often throughout history, why they seem independent of any specific individuating features, and thus what is common to these debates about new technologies (Orben, 2020). Economic science offers a unifying definition that highlights the changes to producer cost structures that characterize new technologies of every sort: forward-looking fixed-cost investments in new knowledge that enhance efficiency and enable variable labor cost savings going forward (Romer, 1990; Shaddy et al., 2022). Embracing this definition might help to better theoretically integrate consumer psychology research on the distinct features of new technologies and potentially enhance its interdisciplinary impact.

Similarly, consumer psychologists have documented aversive lay reactions to the prospect of their own jobs being displaced by new technologies (Granulo et al., 2019). However, it may be fruitful to examine not only these highly visible present consequences but also the aspects of technological disruptions that often go overlooked because they are less apparent in the present, such as the past investments required to develop new advances and the potential future benefits they can bring (Shaddy et al., 2022). Understanding how to close the gap between lay and expert views of labor-saving technologies may thus require insights from the psychology of intertemporal choice (cf. Baron et al., 2006; Hershfield et al., 2011; Klotz et al., 2018), and offer practical insights for firms and policymakers seeking to increase public support for forward-looking investments and policies.

4.4 | Lay perspectives on macroeconomics

Macroeconomics is the study of the overall economy, and examines country-level phenomena such as inflation, rate of economic growth, and GDP. Though these outcomes are not central to consumer psychology, lay perceptions of them may have important implications for outcomes that are, such as consumer confidence, price expectations and spending, public policy choices, and views about the impact of global markets.

4.4.1 | Economic pessimism

While research on how lay people reason about the macroeconomy is limited, several papers demonstrate that they are miscalibrated about various macroeconomic measures. For example, inflation is strongly overestimated (e.g., Bruine de Bruin et al., 2012; Georgana et al., 2014), as is the amount of upward mobility in the United States (Davidai & Gilovich, 2015), while the skewness of income and wealth distributions tends to be underestimated (e.g., Kraus et al., 2019; Norton & Ariely, 2011). But the most notable divergence from expert economic perspectives may be lay pessimism about the rate of growth and the direction of the overall economy.

Returning to the SAEE, the largest differences between economists and the general public were found on items concerning the growth and direction of the economy, leading Caplan (2002) to write "economists are systematically more optimistic about the past, present, and future of the economy than other people are." For example, economists were twice as likely as the general public to rate that the average American's standard of living would rise in the 5 years following the SAEE (50% vs. 24%). The general public was also more than twice as likely to indicate that most new jobs being created were low-paying (79% vs. 32% of economists), and thus less than half as likely to rate that most new jobs paid well (16% vs. 39% of economists).

Large-scale polling confirms that economic pessimism has remained constant in the decades following the SAEE. Nearly every year since Gallup started asking Americans what they thought about

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

the direction of "economic conditions in the country as a whole," most responded that they are "getting worse" (Gallup, 2023). Pew surveys found that most Americans expect the economy to weaken over the coming decades (Pew Research Center, 2019) and that only a third expect their children to be "better off than people are today" (Pew Research Center, 2006). Similar patterns of pessimism are evident in most developed nations (Pew Research Center, 2017), and a recent survey of Millennials across 42 countries and territories found economic optimism to be at record lows (The Deloitte Global Millennial Survey, 2019).

Economic pessimism may, in part, reflect a general negativity bias (Soroka et al., 2019). Negativity bias has twofold effects on economic pessimism. First, humans tend to be more attentive to negative information, and may thus focus more on any signs of deteriorating economic conditions than any signs to the contrary. Second, negativity bias favors the provision of negative news content, so people may be exposed to negatively-biased stories about the economy. But economic pessimism does not seem to result from a lack of factual macroeconomic knowledge alone. It also seems rooted in lay beliefs about the economy that differ from the conclusions of formal economic models. Specifically, people appear to be pessimistic about the course of the economy because they underappreciate the potential for technological change to increase productivity.

In recent research (Andre et al., 2022), professional economists and lay people were asked to consider the effects of hypothetical macroeconomic shocks, such as how a sudden increase in oil prices would impact inflation and unemployment. Their expectations differed considerably. Lay responses focused far more on demand-side effects than supply-side behavior. Work on "efficiency neglect" (Dana et al., 2023) similarly shows that lay people focus on demand effects and neglect supply-side changes. As populations and economies grow, so does overall consumption, putting increased demand on limited resources and potentially pushing up real prices as competition for them intensifies. At the same time, more people means more ideas and more innovation, and increased demand creates incentives to produce things more efficiently and invent new substitutes, all of which pushes real prices down. Given the intuitive, static nature of lay economic thought, people consistently underweight the latter possibility, which is a product of dynamic effects. As such, they are pessimistic about how the cost of living has changed over time and how it will change in the future.

Consider what it might take to gauge how prices for various consumer products have changed over time. This task is not so simple. Nominal prices for most things have risen over time. But that could merely reflect inflation, a normal consequence of an increasing money supply. Monetary policies typically aim to produce a small amount of inflation, such that most of us have experienced rising prices over our lifetimes. But wages rise for the same reason. To really know whether something has gotten more expensive (i.e., whether its *real* price has changed), a simple method would be to divide its nominal price across time by some measure of wages, thus expressing the real prices of products in terms of the amount of work time needed to buy them (Cox & Alm, 1999). Conveniently, the United States Board of Labor Statistics has tracked average prices for various consumer goods monthly since at least 1980, and the average hourly wages of nonsupervisory and production workers (e.g., workers in retail, hospitality, construction, mining) for even longer.

Figure 2 below shows how the real prices of various goods—that is, the hours of labor needed to buy them—have changed from 1980 to the present. Nearly all of them have gotten cheaper in real terms, and often substantially so: most are at least 25% cheaper, while some (sugar, coffee, rice, bananas) are less than half as expensive! That may seem surprising. After all, food production relies on finite inputs like potassium, agricultural space, and livestock, while gasoline and energy production require limited resources like oil. Meanwhile, the world population has doubled since 1980, and people in developed economies are consuming more and more. Indeed, these trends are surprising to many: nationally representative panels believe, on average, that all of these items have gotten more expensive in real terms (Dana et al., 2023). Such findings are also consistent with the SAEE, which showed that 70% of the general public thought family incomes for average Americans were declining relative to the cost of living, compared with only 22% of economists.

Why has economic pessimism remained so prevalent even as the real prices of so many goods continue to fall? The changes depicted in Figure 2 are the result of supply and demand dynamics. Because they were in competition with each other, suppliers of these goods faced pressures to produce them more efficiently and waste less. Demand pressures also represent profit opportunities: those who find ways to produce more can find ways to sell more. But lay neglect of market dynamics may make that difficult to appreciate. Consider the predictions of the population alarmist Paul Ehrlich (1968). In 1968's *The Population Bomb*, he predicted that catastrophic global starvation was inevitable because the population was growing faster than the food supply could possibly keep up with. Later, he famously predicted impending shortages of copper, in part because of the amount of copper plumbing that would be required by the growing number of homes in the developed world.

The copper crisis never happened—and Ehrlich lost a very public wager with economist Julian Simon about the cost of copper—in part because of the invention of substitutes. PVC piping proved to be particularly effective and substantially cheaper, given the demands on limited supplies of copper. Today, alternatives like PEX have overtaken copper as the standard in residential plumbing. Ehrlich's analysis failed to anticipate these advances because it was fundamentally *static*, simply extrapolating what would happen if more people did the exact same thing. But market dynamics virtually guarantee that such extrapolations will miss the mark. If any resource becomes too scarce, its increased price makes existing alternatives more attractive and incentivizes the creation of new ones. Similarly, consumers' extrapolations about the future availability of goods are excessively pessimistic because they account for increasing demand but rely on a static, unchanging view of supply.

Lay beliefs about the macroeconomy have several implications for consumer behavior. Economists and policymakers are concerned with public perceptions of the macroeconomy because they can

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

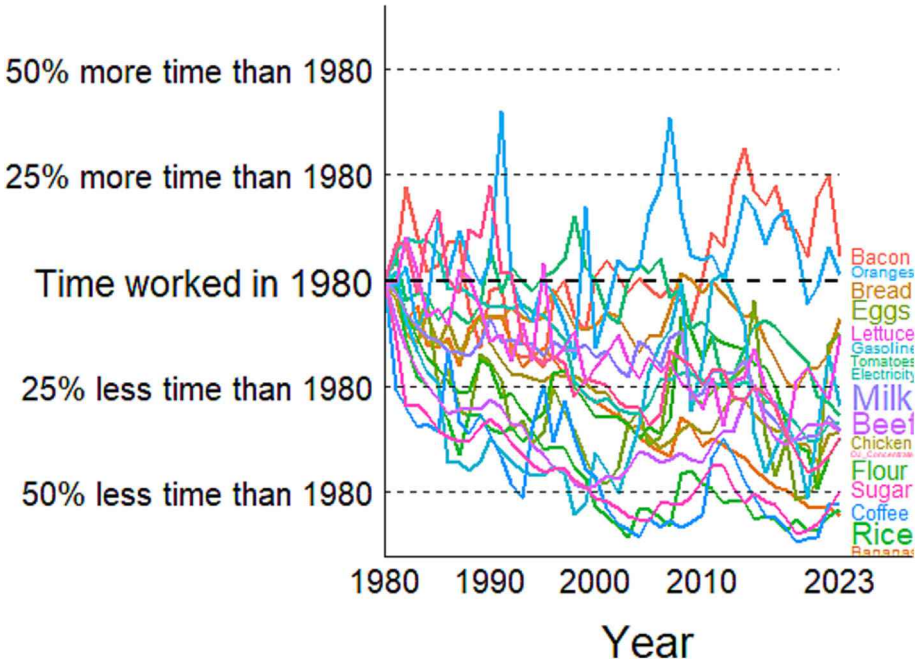

FIGURE 2 *Work time needed to buy various goods.*

become somewhat self-fulfilling. For example, if enough people expect inflation, inflation can actually increase. Thus, understanding the sources of economic pessimism is worthy of study in itself. But the lay mental models that give rise to economic pessimism can also help us understand how people think about inflation and the cost of living. For example, research on the "money illusion" shows that people think about the nominal value of money rather than its real value, and fail to "adjust" for inflation (Mees & Franses, 2014; Shafir et al., 1997). Similarly, consumers tend to conflate inflation with the cost of living (Bryan, 2002). Such illusions are understandable when one considers that the source of inflation itself is dumbfounding to most consumers.

The actual "culprit" behind inflation—that money has become less scarce over time due to increased supply—is something that consumers cannot see or experience. Even less comprehensible is how modern monetary policies target inflation through interest rate policies. Consumers thus tend toward more proximal explanations of what they observe, and assume that prices have really increased rather than just nominally. And if the real prices of goods are increasing, the most proximal explanation is that firms are deciding to charge more, perhaps taking license to do so from input cost increases. Increasing prices are thus most easily grasped by consumers through so-called "greedflation," which emphasizes the selfish motivations of firms. In this way, consumers' perceptions of phenomena like inflation and growth are closely tied to their perceptions of industrial organization.

4.4.2 | The global impact of modern markets

More broadly, the lay public may misperceive a variety of macroeconomic trends regarding the societal impact of global markets, essentially exhibiting another form of zero-sum thinking, writ large. People from the developed world routinely express concerns that the very purpose of global markets is to enable the wealthy to exploit impoverished populations around the world with impunity, keep them mired in poverty, and fuel the ever-increasing levels of inequality that inevitably result from global commerce (Leiser et al., 2017). Indeed, compared to 1800, when the vast majority of the global population lived in extreme poverty, global income inequality did increase until around 1975, as the now-developed world experienced rapid growth and a tenfold increase in wealth while the developing world mostly remained poor (Roser, 2017).

But over the ensuing decades, as access to global markets has increased sharply among the global poor, global inequality has *fallen* dramatically. Populations from developing and emerging economies have experienced disproportionate income gains relative to the wealthy developed world, driving a convergence in global incomes that is projected to continue (Hellebrandt & Mauro, 2015; Lakner & Milanovic, 2015; Roser, 2017). And extreme poverty has declined precipitously over the last two centuries, leading the World Bank to increase its international poverty line threshold in 2017, and sparking discussions about the possibility of eradicating poverty altogether (Roser, 2022). While most of the world remains much poorer than citizens of developed economies, and enormous disparities in income, wealth, and opportunity still exist, these trends appear far more optimistic than the views of the lay public might suggest (Dana et al., 2023). To the extent that consumers rely solely on observations from where they sit in the developed world to understand such societal problems, they may frame these problems too narrowly to realize that their global impact, or their consequences for developing-world populations, may be quite different (Bhattacharjee & Paolacci, 2023; Jachimowicz et al., 2022).

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Beyond economic indicators, concerns that continued global market expansion and exposure to market incentives will degrade the promotion of human rights, welfare, and social freedoms also seem common among social scientists and the public (Kasser et al., 2007; Marx, 1904; Polanyi, 1944; Sandel, 2012; Simmel, 1990; Vohs et al., 2006). However, empirical studies of morally-relevant outcomes often find limited evidence of moral decline, and instead show that people living in market-oriented societies exhibit higher levels of trust and greater aversion to immoral behaviors like cheating and theft (Brennan & Jaworski, 2016; Callais et al., 2022; Henrich et al., 2001; Storr & Choi, 2019). Seven waves of the World Values Survey over the last four decades suggest that this seem true at a global level. Longitudinal trends from 111 countries reveal that the power of traditional cultural and religious values, rigid social controls, and authoritarianism is strongest among poor populations struggling for survival, but wanes over time in countries that experience sustained socioeconomic development. Gains in wealth tend to coincide with predictable shifts toward cultural values supporting gender equality, religious freedom, ethnic and lifestyle diversity, individual self-expression, quality of life, and environmental protection (Inglehart, 2018; Inglehart & Welzel, 2005). Notably, though these findings suggest that global market integration promotes movement toward Western liberal values in particular (which underlie modern conceptions of human rights), these are the same ideals that scholarly critics of markets worry might be eroded in societies that become too market-oriented.

Similarly, the notion that economic growth is necessarily at odds with environmental protection is grounded in accurate observations that growing economies rely on finite natural resources. But as noted above, this view seems incomplete in light of the very purpose of market pricing mechanisms from a normative economic standpoint: to incentivize the development of innovations that conserve scarce resources or rely on alternatives to them, resulting in staggering efficiency gains and the birth of the renewable energy industry over the last several decades (Dana et al., 2023). It also overlooks mainstream economic perspectives on the drivers of economic growth: rather than being fundamentally dependent on using up limited natural resources, as observation alone might suggest, it is instead driven by increases in human capital formation and advances in human ingenuity, neither of which are intrinsically finite (Autor, 2015; Romer, 1990, 1994).

However, lay perceptions that good economic outcomes and environmental protection are inherently opposed may promote advocacy for zero-sum policy solutions and reduce consideration of other alternatives. For instance, the public tends to distrust win-win corporate sustainability initiatives that simultaneously benefit firms and help the environment (Makov & Newman, 2016). Moreover, there is increasing support for the Degrowth movement, which suggests that slowing or reversing economic growth is essential to safeguarding the future of humanity and the planet (Hickel et al., 2022). This movement also suggests that reversing growth would free up more resources for the poor and reduce global inequality, in line with zero-sum perceptions of growth and resource consumption, but contrary to normative economic views on their welfare implications. In the words of one critic, "degrowth supporters are living in a fantasy where they assume that if you bake a smaller cake, then for some reason, the poorest will get a bigger share of it" (Horowitz, 2022).

It might indeed be possible for wealthy, developed nations to consider economically costly environmental regulations without dramatic welfare reductions for many of their citizens. But for the developing nations currently responsible for the majority of global carbon emissions and other environmental harms, these welfare trade-offs are likely to be far steeper (cf. Hall & Leeson, 2007). Policies that require forgoing growth, economic development, and wealth creation may entail preventing large swaths of their populations from satisfying basic needs or escaping extreme poverty (Cowen, 2018; Deaton, 20153).

Moreover, given the complex interdependencies that characterize global markets, it may not be feasible for wealthy nations to implement degrowth policies in isolation without severely impacting welfare outcomes in the developing nations reliant on trading with them. As illustrated by the disproportionate harms that COVID-19-induced disruptions to global commerce inflicted on developing nations, limiting international trade would likely be most detrimental to the poorest participants in it, thereby exacerbating global inequality (Naudé, 2023). And because wealthier participants would also be negatively impacted, these policies are likely to face fierce political resistance on all fronts (Piper, 2021), relative to positive-sum alternatives like Green Growth or Longtermism (MacAskill, 2022; Van der Leeuw, 2020). Consistent with these latter possibilities, normative economic perspectives suggest that the pursuit of sustainability need not come directly at the expense of corporate, government, or individual self-interest maximization. It simply calls for these stakeholders to maximize their interests over a longer time horizon and weigh future outcomes alongside immediate outcomes. There may be opportunities here for consumer psychologists to find ways to better communicate the potential for win-win solutions between stakeholders with opposing perspectives, and thereby depolarize the public discourse around these issues (cf. Baron et al., 2006; Bolderdijk et al., 2013; Davidai & Tepper, 2023; Makov & Newman, 2016).

This disconnect between the lay economic perspectives of developed- versus developing-world populations may be quite fundamental. For instance, a recent poll found that respondents from developing nations like India, Thailand, and Indonesia strongly agreed that "What is good for business is usually good for the rest of society" and believed that "The next generation will probably be richer, safer, and healthier than the last," those from developed nations like the USA, UK, and Germany disagreed with both, on balance (YouGov, 2015). These findings hint at the possibility that the welfare impact of market-driven growth and wealth creation may be readily visible from the daily experiences of people living in developing economies (Cowen, 2018; Deaton, 2015; Sen, 1999), reducing the prevalence of zero-sum economic thinking.

Conversely, for people living in developed economies that have been wealthy for generations, who have never personally experienced extreme poverty or been lifted out of it by market-driven growth, these welfare implications may be far less visible, leading to greater

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

support for collectively abandoning wealth creation to focus on wealth distribution alone. Consistent with these possibilities, recent economic research using a representative U.S. sample finds that zero-sum thinking is markedly less prevalent among Americans whose families immigrated from worse economic circumstances and experienced upward mobility within the last four generations, as well as among birth cohorts who grew up during periods of rapid economic growth versus more recent periods of slower growth interspersed with times of recession (Chinoy et al., 2023). The authors note that these findings may help explain the appeal of zero-sum populist policies among younger generations.

This area of study is consequential, central to public discourse, and replete with unanswered questions. We believe that consumer psychology can play a larger role in this discourse by further exploring the antecedents and consequences of these patterns of thought. Moreover, many of the societal concerns our field examines are studied from a developed-world perspective. For instance, there are sizable literatures examining the negative consequences of money, highly caloric foods, overconsumption, materialism, and choice overload. These problems may indeed cause real harm, but they are problems of abundance nonetheless. And they coexist with problems of scarcity still faced by many people around the world: poverty, malnutrition, and a lack of access to the goods required to meet their basic needs. There may thus be opportunities for consumer psychologists to explore how many of the topics we study are viewed differently from developing-world perspectives or developing market contexts, and to achieve a more general understanding of them.

5 | IMPLICATIONS FOR CONSUMER PSYCHOLOGY: THE MISMARKETING OF MARKETS

We suggest that the study of lay economic reasoning may be an important key to better understanding countless marketplace behaviors, improving scientific communication and policy discourse, and promoting choices that enhance societal welfare. Consumer psychology is well situated to create this knowledge, and doing so need not require endorsing the economic view of the world.

5.1 | The neglected normative Foundation of Markets

We teach our students that marketing can serve as a force for good. Yet many of us are acutely aware that they often regard marketing as inherently harmful, and tend to express sentiments in line with popular perceptions that profit-seeking enterprises and global markets are fundamentally harmful to society (Shugan, 2006). Economic experts have also long discussed the difficulty of getting students in introductory classes to grasp important but unintuitive economic concepts like opportunity cost, comparative advantage, gains from trade, and the function of market pricing mechanisms (Caplan, 2007; Carter & Irons, 1991; Dittmar, 1996; Frey & Meier, 2005; Leiser & Shemesh, 2018; Newcomb, 1893; Pang & Marton, 2003; Rubin, 2003; Sapienza & Zingales, 2013; Stein, 1979).

Why is that? Most members of the general public may have simply never heard a clear articulation of the normative foundation of market exchange. Their evolved moral intuitions and lay mental models may not only be reinforced by their experiences in the marketplace, as we suggest, but also by anti-business narratives in popular entertainment (Ribstein, 2012; Shugan, 2006; Stein, 1979), and by populist messaging from politicians who pose as knowledgeable economic authorities but lack actual economic training (cf. O'Roark & Wood, 2011). For instance, though the term "trickle-down economics" is a fixture in popular political discourse, it is not a meaningful economic concept that is recognized or endorsed within the economic literature (Sowell, 2012). The "dismal science" may continue living up to its moniker if it keeps presenting a worldview that is distasteful to many but truly understood by very few, and doing little to offer evidence-based narratives that can outcompete popular misconceptions and more intuitively communicate the normative basis of markets (Acerbi & Sacco, 2018; McCloskey, 1990). As expressed by the economist Alan Blinder in an interview with Erickson (1994):

> Too many American kids are brought up without any basic literacy in economics. I do not mean knowledge of fancy economic theory, I mean fairly elementary things like 'demand curves usually slope down.'
>
> I think the economists, with some exceptions, do not help a lot in that they spend precious little time talking … to ordinary people in ways that ordinary people can understand.

It is true that "positive" economic science aims to be purely descriptive. It is not founded on particular virtues, deontological principles, or sacred values, and none of these idiosyncratic ideals are privileged over others in economic analysis (e.g., by making value judgments about the nobility of market actors' motivations, or the relative virtue of different preference orderings). Yet even descriptive economic work *does* have an implicit normative foundation. It defines welfare in terms of individual utility maximization. Utility is assumed to reflect the subjective desires and conceptions of well-being that are unique to each individual yet present in each of them and to thereby accrue to individuals when their desires are satisfied (Arrow, 1973; Sen, 1979). The fundamental economic act is voluntary exchange: when people face no coercive pressures and are free to act as they please, cooperative transactions with others are assumed to take place only when they satisfy the desires of both parties more than opting out of them, leaving both of them better off than before by their own subjective standards (Mas-Colell et al., 1995; Rubin, 2014).

However, although individual desires are unlimited, the resources needed to satisfy them are scarce and limited. Accordingly, economic efficiency is desirable because it reflects the resource allocations that

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

enable most people to satisfy their desires and minimize waste, and economic growth and wealth creation are desirable because they alleviate scarcity and generate additional resources to allocate to more people. This is one way to describe the normative underpinnings of economics, and it allows governments and policymakers to use the tools of descriptive economic scholarship to make welfare calculations and use them to determine which courses of action could benefit the most people.

Simply put, the moral argument for the modern marketplace is that it maximizes human welfare. It enables millions of strangers to cooperate to satisfy as many people's desires as possible, and to do so at the lowest possible cost by consuming as few resources as possible (Rubin, 2014). The moral argument for profit-seeking enterprise is similar. Businesses improve societal welfare and generate prosocial outcomes simply by engaging in these cooperative exchanges on a consistent basis: they employ people who voluntarily trade their labor for a given amount of wages to enhance their own welfare, who then collaborate to produce valuable goods and services that people voluntarily purchase to satisfy their own desires (Brennan et al., 2021). Anything they earn in return depends entirely on the willing cooperation of these exchange partners, and they can profit only to the extent that they are better at cooperating with them than other businesses (Rubin, 2014). Because their profits reflect their success in giving people what they want, they can thus be seen as an indication of the "net contribution [the business] makes to the social good" (Arrow, 1973).

Although marketplace activity consists entirely of voluntary cooperative acts that might be regarded as definitionally prosocial in other contexts, it is far more readily associated with cutthroat competition than cooperation in the popular imagination (Rubin, 2014). Competition is simply a byproduct of resource scarcity, and its role in markets can also be seen as a way to facilitate better cooperative outcomes: market actors can better satisfy their desires when they can choose who to cooperate with from a set of many potential partners. Yet competition is mentioned about eight times as often as cooperation in economics textbooks, making it easy for even students in economics courses to lose sight of the fundamentally cooperative nature of the marketplace. And because "competition" naturally triggers thoughts of winners and losers rather than the positive-sum outcomes associated with "cooperation," these rhetorical choices may also reinforce zero-sum economic thinking (Rubin, 2014).

Similarly, the economic historian Deirdre McCloskey (2019) laments that the politically loaded term "capitalism" may fuel misperceptions of the societal benefits of markets in itself, as it erroneously implies that these benefits are driven by capital accumulation rather than by ideas and innovation (cf. Romer, 1990, 1994). She instead favors the term "market-tested betterment" as a more appropriate representation of the process of value creation through market-driven innovation. Other scholars also take issue with narrow public conceptions of marketplace ethics. For instance, ethical business practice is often thought to be synonymous with activities that go *beyond* the core practices of businesses, such as additional initiatives that benefit a broader set of stakeholders, corporate support for charitable causes, CSR or sustainability campaigns, or sociopolitical activism supporting particular partisan values. Even business ethics courses often neglect to communicate the ethical foundation of everyday business practice, and how businesses *intrinsically* enhance societal welfare through their cooperative exchange behaviors alone (Brennan et al., 2021).

All of these perspectives highlight the limitations of the narratives typically offered by economic science, which often contain arcane terminology and unintuitive arguments that do not resonate with the non-expert public. In the absence of compelling narratives that explain the benefits of market-driven welfare maximization in intuitive *moral* terms versus economic terms, widespread public perceptions of the societal harms of modern markets are likely to persist (Acerbi & Sacco, 2018; McCloskey, 1990).

5.2 | How consumer psychologists can help

We suggest that this ongoing divergence between lay versus scientific economic perspectives presents opportunities for consumer psychologists to contribute their expertise and benefit in return. We are committed to highlighting unrealized win-win opportunities, after all.

First, this simply entails taking normative benchmarks from economic theory and empirical work seriously, and considering how they compare to the descriptive accounts of lay consumer reasoning that most consumer psychology papers already provide. In the absence of some relevant scientific benchmark, it can be difficult just to interpret many findings, and to know what constitutes lay theory versus accurate perceptions of the real world. As we outline in Table 3 and highlight in depth throughout Section 4, many of the marketplace phenomena we study could be reconstrued and described differently in light of these normative perspectives. Incorporating these comparisons could make our own empirical work more informative and more appealing to different audiences, regardless of how much these benchmarks reflect our own beliefs on an individual basis.

To be clear, this is *not* an invitation to join some free-market fundamentalist cult. We are by no means suggesting that economic scientists are always right, that normative economic perspectives do not rest on debatable simplifying assumptions, or that real-world markets always live up to these normative ideals and succeed in maximizing societal welfare. On the contrary, we are well aware that markets are far from perfect in reality, and none of the arguments we advance in this article depend on assuming otherwise. Indeed, much of economic scholarship is devoted to documenting market imperfections and failures. In fact, to the extent that you as our readers take a dim view of the premises that inform most economic scholarship, all the better! If our ambitions as a field include convincing economists to incorporate more descriptive findings from consumer psychology into economic theory, using the language of economics to spell out the normative implications of those findings may be a necessary first step in sparking that interdisciplinary dialogue. The pioneering work that spawned JDM and behavioral economics (Kahneman & Tversky, 1979, 1984; Tversky & Kahneman, 1974, 1981), and the influential subsequent research questioning the relevance of economic rationality standards to the adaptive problems human brains evolved to solve

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

(Gigerenzer & Brighton, 2009; Gigerenzer & Goldstein, 1996; Gigerenzer et al., 1999), might offer some useful precedent here.

Second, it's again worth highlighting the potential upside of further research on lay economic reasoning within consumer psychology. We thus circle back to the premise we started with: "consumer" psychology refers to how people think when assuming a specific economic role within market exchange contexts. Given our stated mission, an outsider might naturally assume that systematically studying how consumers perceive their own roles, and how their experiences from this perspective shape their understanding of the marketplace and the normative standards they apply, is a central priority of our field. That's not the timeline we live in. However, we believe that improving our understanding of lay economic reasoning is eminently achievable, and we hope the theoretical foundation we provide in this article is helpful in that regard. Moreover, we believe that the approach we suggest reflects many of the criteria we associate with valuable research. Work of this nature is intrinsically marketplace-specific and consumer-relevant by any definition. As indicated by the ultimate explanations we propose in Section 2 and the proximate theoretical propositions we outline in Section 3, there is potential here to bring together scholars interested in very different levels of analysis. Building on our unifying framework may also present opportunities for greater theoretical integration across disparate subfields of consumer psychology, as we suggest in Section 4.

Given its inherently interdisciplinary nature, consumer psychology seems especially well-positioned to assume ownership of this area of study. Questions about lay beliefs, reasoning processes, and the cognitive mechanisms underlying them, are descriptive psychological ones that many economists may not be well equipped or motivated to answer. As the economic historian Mokyr (2017), p. 1), they may also overlook the importance of these questions: "Economic change in all periods depends, more than most economists think, on what people believe." Though some economists have indeed discussed lay economic misperceptions in non-empirical articles or conducted surveys to document the divergence between public opinion and expert economic perspectives (cf. Caplan, 2002; Rubin, 2003), they have understandably made little attempt to empirically examine the psychological mechanisms that underlie them.

At the same time, psychologists who rarely interact with economic scientists may have limitations of their own: even those who specialize in studying lay economic reasoning may sometimes exhibit lay misperceptions themselves, such as neglecting how prices inform and incentivize production decisions and focusing exclusively on their immediate distributive effects (Lunt & Furnham, 1996). As consumer psychologists, we have expertise in both psychology and business, access to the perspectives of colleagues with specialized economic expertise (e.g., those who conduct quantitative marketing research, and some who conduct marketing strategy research), and even to those of practitioners who may be quite familiar with the supply-side incentives that businesses face but consumers often misperceive (Bhattacharjee et al., 2017). We thus have some unique advantages. Moreover, this area of inquiry may also draw interest from scholars across a variety of disciplines–notably, this article integrates ideas from scholars in marketing, psychology, economics, sociology, political science, anthropology, evolutionary biology, and philosophy. Devoting more attention to these questions may thus offer opportunities for consumer psychology to expand its interdisciplinary readership and impact.

Third, as noted in the preceding subsection, markets seem to have a marketing problem. So does marketing. The stakes may be high not only for marketing scholars, but for humanity more broadly. Notwithstanding her distaste for the "capitalism" label, Deirdre McCloskey (2019) suggests that all of economic history can be summarized in one sentence, which she elaborates upon in later writing:

> Once upon a time we were all poor, then capitalism flourished, and now as a result we are rich.
>
> (1991)

> The much-maligned "capitalism" has raised the real income per person of the poorest since 1800 not by 10% or 100%, but by over 3,000%.
>
> (2019)

Even as the population has increased eightfold since 1800, global commerce and economic growth have created staggering amounts of wealth, not simply moved it around. All that newfound wealth has enabled humanity to dramatically improve our collective capacity to meet our nutritional needs, lead long and healthy lives, maintain safe and peaceful societies, guarantee various rights and freedoms, enjoy our leisure time, and create art and culture (Brennan et al., 2021; Cowen, 2018; Deaton, 2015; Sen, 1999). The development of modern markets that can harness the self-interested motivations of millions of individuals and businesses, use incentives to direct them toward cooperative and mutually beneficial exchange behaviors, and thereby promote wealth generation and collective good, has thus been described as "perhaps the most important social invention mankind has yet achieved" (Schultze, 1977).

Of course, some readers may feel that these observations paint an overly rosy picture, and provide an incomplete account of the various ways the modern marketplace affects human well-being, both good and bad. We do not disagree. These concerns are entirely justified, and there are active debates within economic science on the extent to which commonly used economic indicators and measures of welfare capture the totality of human well-being, and on what alternate measurement approaches might be better (Sen, 1999; Stiglitz et al., 2009). But understanding traditional economic conceptions and measures of welfare, and the normative assumptions on which they are founded, is a crucial first step in identifying what they miss and why it matters.

Moreover, regardless of the limitations of such measures (e.g., real income per capita, as cited above), what they reveal about the sheer impact modern markets have had on humanity over a remarkably short time span is undeniable. To the extent that consumer psychologists believe that effect sizes and practical significance should help determine which areas of research we consider to be

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

important and worth prioritizing, it's hard to imagine a target of greater consequence. Even minor contributions to our collective understanding of the psychological drivers of lay aversion to market-based solutions, communication strategies that make these policies more palatable and easier to grasp, or ways to depolarize the public discourse around them, could make a substantial real-world impact if they influence policy at anything beyond a very small scale. Consumer psychologists devote a great deal of attention to studying nudges and interventions that can affect individual consumption choices and behaviors, especially those with the potential to influence marketing practice. We suggest that contributing insights about how to market market-oriented policies more effectively, especially those with the potential to affect lay policy choices or policymaker communication strategies, maybe another route to consumer relevance and practical impact that the field has largely overlooked.

Our perspective aligns with that of Loewenstein and Chater (2017), who note that relative to behavioral nudges and interventions, traditional economic policy levers (e.g., market incentives, subsidies, taxes, and design choices) tend to be substantially more powerful and effective in changing behavior. However, they observe that most behavioral scientists have focused narrowly on proposing behavioral nudges as an implicit substitute for economic policy solutions while overlooking how much value could be added by recognizing the complementarities between the expertise and policy toolkits of these disciplines. In particular, behavioral insights could play a crucial role in improving how policies are explained and implemented, so as to enhance their effectiveness and reduce the risk of unintended consequences. The authors highlight some of these opportunities in the context of solutions to economic inequality (p. 46):

> Whether inequality is tolerated, and whether measures to reduce inequality and its consequences are put into place, will depend on the attitudes of citizens … However, these attitudes are barely discussed, let alone studied, by economists. Rather, the topic of attitudes and attitude change lies squarely in the domain of behavioural science. Those looking to move beyond pure economics and apply behavioural science to the problem of inequality have a significant opportunity to do so. In particular, behavioural science provides insight into how to best inform the population about the problem of inequality in a way that conveys its severity, communicates its causes and identifies potential solutions.

Hence, given consumer psychologists' expertise in areas like persuasion, message framing, judgment and decision making, intertemporal choice, motivated reasoning, and morality and fairness, we believe there is ample opportunity to improve the communication and implementation of a wide variety of policy proposals. Many market-based policies that are widely endorsed by economic experts lack popular appeal, limiting both their political feasibility and potential effectiveness. Helping close the gap between lay and expert policy perceptions could earn consumer psychologists a seat at the tables of policymakers alongside economists. Accordingly, a better understanding of the nature and implications of lay economic reasoning presents opportunities to increase the impact of our pedagogy, scholarship, and outreach alike.

6 | CONCLUSIONS: THE PATH FORWARD

There is no marketing without markets. We therefore close with a call for consumer psychologists to take ownership of the study of lay economic reasoning, and to recenter markets in our work as marketing academics. We hope the foundation we have laid in this paper can facilitate these efforts. Understanding how markets are perceived by non-expert consumers could be an overlooked means of generating valuable insights about the psychology underlying their marketplace interactions and purchase decisions. And to the extent that such insights could actually improve policy communication, promote better public understanding, or pave the way toward more human-shaped and inclusive markets, the upside potential here is unlimited. As consumer psychologists, our voices have not always been well represented in such conversations. But there is perhaps no one better positioned to do this work.

ORCID

Amit Bhattacharjee https://orcid.org/0009-0005-1346-3682

REFERENCES

Aaker, J., Vohs, K. D., & Mogilner, C. (2010). Nonprofits are seen as warm and for-profits as competent: Firm stereotypes matter. *Journal of Consumer Research*, *37*(2), 224–237. https://doi.org/10.1086/651566

Acerbi, A., & Sacco, P. L. (2018). Folk-economic beliefs as "evidential fiction": Putting the economic public discourse back on track. *Behavioral and Brain Sciences*, *41*, e159. https://doi.org/10.1017/S0140525X18000250

Achtypi, E., Ashby, N. J., Brown, G. D., Walasek, L., & Yechiam, E. (2021). The endowment effect and beliefs about the market. *Decision*, *8*(1), 16–35. https://doi.org/10.1037/dec0000143

Aghion, P., & Howitt, P. (1992). A model of growth through creative destruction. *Econometrica*, *60*(2), 323–351. https://doi.org/10.2307/2951599

Aitken, B., Harrison, A., & Lipsey, R. E. (1996). Wages and foreign ownership a comparative study of Mexico, Venezuela, and the United States. *Journal of International Economics*, *40*(3–4), 345–371. https://doi.org/10.1016/0022-1996(95)01410-1

Akerlof, G. A., & Shiller, R. J. (2015). *Phishing for phools: The economics of manipulation and deception*. Princeton University Press. https://doi.org/10.2307/j.ctvc777w8

Aksoy, A., & Ng, F. (2010). The evolution of agricultural trade flows. *World Bank Policy Research Working Paper 5308*. https://doi.org/10.1596/1813-9450-5308

Andre, P., Pizzinelli, C., Roth, C., & Wohlfart, J. (2022). Subjective models of the macroeconomy: Evidence from experts and a representative sample. *Review of Economic Studies*, *6*, 2958–2991. https://doi.org/10.1093/restud/rdac008

Armstrong, G., Gurol, M., & Russ, F. (1979). Detecting and correcting deceptive advertising. *Journal of Consumer Research*, *6*, 237–246.

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Arnold, D. G., & Bowie, N. E. (2003). Sweatshops and respect for persons. *Business Ethics Quarterly*, *13*(2), 221–242. https://doi.org/10.5840/beq200313215

Arrow, K. J. (1973). *Information and economic behavior* (Vol. 28). Federation of Swedish Industries.

Autor, D. H. (2015). Why are there still so many jobs? The history and future of workplace automation. *Journal of Economic Perspectives*, *29*(3), 3–30. https://doi.org/10.1257/jep.29.3.3

Baron, J. (2001). Confusion of group interest and self-interest in parochial cooperation on behalf of a group. *Journal of Conflict Resolution*, *45*(3), 283–296. https://doi.org/10.1177/0022002701045003002

Baron, J., Bazerman, M. H., & Shonk, K. (2006). Enlarging the societal pie through wise legislation. *Perspectives on Psychological Science*, *1*(2), 123–132. https://doi.org/10.1111/j.1745-6916.2006.00009.x

Baron, J., & Kemp, S. (2004). Support for trade restrictions, attitudes, and understanding of comparative advantage. *Journal of Economic Psychology*, *25*(5), 565–580. https://doi.org/10.1016/S0167-4870(03)00064-3

Bastiat, F. (1845). A petition from the manufacturers of candles, tapers, lanterns, sticks, street lamps, snuffers, and extinguishers, and from producers of tallow, oil, resin, alcohol, and generally of everything connected with lighting. *Sophismes économiques*.

Bastiat, F. (2011). Economic Sophisms and "What Is Seen and What Is Not Seen." In J. de Guenin (General Editor), *The Collected Works of Frédéric Bastiat* (Vols. 6). Translated from the French by Jane Willems and Michel Willems. Annotations and Glossaries by Jacques de Guenin, Jean-Claude Paul-Dejean, and David M. Hart. Translation Editor Dennis O'Keeffe. Academic Editor, David M. Hart (Indianapolis: Liberty Fund, 2011).

Bearden, W. O., Carlson, J. P., & Hardesty, D. M. (2003). Using invoice price information to frame advertised offers. *Journal of Business Research*, *56*(5), 355–366. https://doi.org/10.1016/S0148-2963(01)00225-9

Becker, G. S. (1962). Irrational behavior and economic theory. *Journal of Political Economy*, *70*(1), 1–13. https://doi.org/10.1086/258584

Bénabou, R., & Tirole, J. (2006). Incentives and prosocial behavior. *American Economic Review*, *96*(5), 1652–1678. https://doi.org/10.1257/aer.96.5.1652

Berman, J. Z., Bhattacharjee, A., Small, D. A., & Zauberman, G. (2020). Passing the buck to the wealthier: Reference-dependent standards of generosity. *Organizational Behavior and Human Decision Processes*, *157*, 46–56. https://doi.org/10.1016/j.obhdp.2019.12.005

Berman, J. Z., Levine, E. E., Barasch, A., & Small, D. A. (2015). The Braggart's dilemma: On the social rewards and penalties of advertising prosocial behavior. *Journal of Marketing Research*, *52*(1), 90–104. https://doi.org/10.1509/jmr.14.0002

Bhagwat, Y., Warren, N. L., Beck, J. T., & Watson, G. F. IV (2020). Corporate sociopolitical activism and firm value. *Journal of Marketing*, *84*(5), 1–21. https://doi.org/10.1177/0022242920937000

Bhattacharjee, A., Dana, J., & Baron, J. (2017). Anti-profit beliefs: How people neglect the societal benefits of profit. *Journal of Personality and Social Psychology*, *113*(5), 671–696. https://doi.org/10.1037/pspa0000093

Bhattacharjee, A., & Paolacci, G. (2023). *Inclusive yet inequitable: Consumer reactions to low-wage labor practices*. Working Paper.

Block, L., Argo, J., & Kramer, T. (2021). The science of consumer psychology. *Journal of Consumer Psychology*, *31*(1), 3–5. https://doi.org/10.1002/jcpy.1205

Blythe, J. (2013). *Consumer behaviour* (2nd ed.). SAGE Publications ltd.

Bolderdijk, J. W., Steg, L., Geller, E. S., Lehman, P. K., & Postmes, T. (2013). Comparing the effectiveness of monetary versus moral motives in environmental campaigning. *Nature Climate Change*, *3*(4), 413–416. https://doi.org/10.1038/nclimate1767

Bolton, L. E., Warlop, L., & Alba, J. W. (2003). Consumer perceptions of Price (un)fairness. *Journal of Consumer Research*, *29*(3), 474–491. https://doi.org/10.1086/346244

Bowles, S. (1998). Endogenous preferences: The cultural consequences of markets and other economic institutions. *Journal of Economic Literature*, *36*, 75–111.

Bowles, S. (2009). Did warfare among ancestral hunter-gatherers affect the evolution of human social behaviors? *Science*, *324*(5932), 1293–1298. https://doi.org/10.1126/science.1168112

Boyd, R., & Richerson, P. J. (1985). *Culture and the evolutionary process*. University of Chicago Press.

Boyd, R., & Richerson, P. J. (1988). An evolutionary model of social learning: The effects of spatial and temporal variation. In T. R. Zentall & B. G. Galef, Jr. (Eds.), *Social learning: Psychological and biological perspectives* (pp. 29–48). Lawrence Erlbaum Associates, Inc.

Boyd, R., Richerson, P. J., & Henrich, J. (2011). The cultural niche: Why social learning is essential for human adaptation. *Proceedings of the National Academy of Sciences*, *108*(2), 10918–10925. https://doi.org/10.1073/pnas.1100290108

Boyer, P., & Petersen, M. B. (2018). Folk-economic beliefs: An evolutionary cognitive model. *Behavioral and Brain Sciences*, *41*, e158. https://doi.org/10.1017/S0140525X17001960

Brennan, J., English, W., Hasnas, J., & Jaworski, P. (2021). *Business ethics for better behavior*. Oxford University Press. https://doi.org/10.1093/oso/9780190076559.001.0001

Brennan, J. F., & Jaworski, P. (2016). *Markets without limits: Moral virtues and commercial interests*. Routledge.

Brown, D. E. (1991). *Human universals*. McGraw Hill.

Brown, D. K., Deardorff, A. V., & Stern, R. M. (2003). Child labor: Theory, evidence, and policy. In K. Basu, H. Horn, L. Román, & J. Shapiro (Eds.), *International labor standards: History, theory, and policy options*. Wiley.

Brownell, K. D., & Horgen, K. B. (2004). *Food fight: the inside story of the food industry, America's obesity crisis, and what we can do about it*. Contemporary Books.

Bryan, M. F. (2002). Is it more expensive, or does it just cost more money? *Federal Reserve Bank of Cleveland, Economic Commentary*, *05*(15), 2002.

Buchanan, J. M. (1978). *Cost and choice: An inquiry in economic theory*. University of Chicago Press.

Buss, A. (2015). *The economic ethics of world religions and their laws: An introduction to max Weber's comparative sociology*. Nomos Verlagsgesellschaft mbH & Co. https://doi.org/10.5771/9783845265834

Callais, J., Harris, C., & Borchard, B. (2022). The moral costs of markets: Testing the deterioration hypothesis. *Journal of Economic Behavior & Organization*, *204*, 200–220. https://doi.org/10.1016/j.jebo.2022.10.007

Campbell, M. C. (1999). Perceptions of price unfairness: Antecedents and consequences. *Journal of Marketing Research*, *36*(2), 187–199. https://doi.org/10.1177/002224379903600204

Campbell, M. C., & Winterich, K. P. (2018). A framework for the consumer psychology of morality in the marketplace. *Journal of Consumer Psychology*, *28*(2), 167–179. https://doi.org/10.1002/jcpy.1038

Caplan, B. (2001). What makes people think like economists? Evidence on economic cognition from the 'survey of Americans and economists on the economy. *Journal of Law and Economics*, *44*(2), 395–426. https://doi.org/10.1086/322812

Caplan, B. (2002). Systematically biased beliefs about economics: Robust evidence of judgmental anomalies from the survey of Americans and economists on the economy. *Economic Journal*, *112*, 433–458. https://doi.org/10.1111/1468-0297.00041

Caplan, B. (2007). *The myth of the rational voter: Why democracies choose bad policies*. Princeton University Press.

Carey, S., & Spelke, E. (1994). Domain-specific knowledge and conceptual change. In L. A. Hirschfeld & S. A. Gelman (Eds.), *Mapping*

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

the mind: Domain specificity in cognition and culture (pp. 169–200). Cambridge University Press. https://doi.org/10.1017/CBO9780511752902.008

Carey, S., & Spelke, E. (1996). Science and core knowledge. *Philosophy of Science*, *63*(4), 515–533. https://doi.org/10.1086/289971

Carneiro, R. L. (2000). The transition from quantity to quality: A neglected causal mechanism in accounting for social evolution. *Proceedings of the National Academy of Sciences*, *97*(23), 12926–12931. https://doi.org/10.1073/pnas.240462397

Carter, J. R., & Irons, M. D. (1991). Are economists different, and if so, why? *Journal of Economic Perspectives*, *5*(2), 171–177. https://doi.org/10.1257/jep.5.2.171

Cavalli-Sforza, L. L., & Feldman, M. W. (1981). Cultural Transmission and Evolution: A Quantitative Approach. In *Of monographs in population biology* (Vol. 16). Princeton University Press.

Ceci, S. J., Kahn, S., & Williams, W. M. (2023). Exploring gender bias in six key domains of academic science: An adversarial collaboration. *Psychological Science in the Public Interest*, *24*(1), 15–73. https://doi.org/10.1177/15291006231163179

Chakraborti, R., & Roberts, G. (2023). How price-gouging regulation undermined COVID-19 mitigation: County-level evidence of unintended consequences. *Public Choice*, *196*, 1–33. https://doi.org/10.1007/s11127-023-01054-z

Chinoy, S., Nunn, N., Sequeira, S., & Stantcheva, S. (2023). *Zero-sum thinking and the roots of US political divides*. Preprint at https://scholar.harvard.edu/files/stantcheva/files/zero_sum_us_political_divides.pdf

Chintagunta, P. K., Dubé, J. P., & Singh, V. (2003). Balancing profitability and customer welfare in a supermarket chain. *Quantitative Marketing and Economics*, *1*, 111–147. https://doi.org/10.1023/A:1023534028314

Choudhary, V., Ghose, A., Mukhopadhyay, T., & Rajan, U. (2005). Personalized pricing and quality differentiation. *Management Science*, *51*(7), 1120–1130. https://doi.org/10.1287/mnsc.1050.0383

Cimpian, A., & Salomon, E. (2014). The inherence heuristic: An intuitive means of making sense of the world, and a potential precursor to psychological essentialism. *Behavioral and Brain Sciences*, *37*(5), 461–527. https://doi.org/10.1017/S0140525X13002197

Clark, G. (2007). *A farewell to alms: A brief economic history of the world*. Princeton University Press. https://doi.org/10.1515/9781400827817

Clark, G., & Feenstra, R. C. (2003). Technology in the great divergence. In *NBER chapters, in: Globalization in historical perspective* (pp. 277–322). National Bureau of Economic Research, Inc. https://doi.org/10.7208/chicago/9780226065991.003.0007

Clark, J. R., & Powell, B. (2013). Sweatshop working conditions and employee welfare: Say it ain't sew. *Comparative Economic Studies*, *55*, 343–357. https://doi.org/10.1057/ces.2012.38

Clements, B., Jung, H. S., & Gupta, S. (2007). Real and distributive effects of petroleum price liberalization: The case of Indonesia. *The Developing Economies*, *45*(2), 220–237. https://doi.org/10.1111/j.1746-1049.2007.00040.x

Cook, C., Diamond, R., Hall, J. V., List, J. A., & Oyer, P. (2021). The gender earnings gap in the gig economy: Evidence from over a million rideshare drivers. *The Review of Economic Studies*, *88*(5), 2210–2238. https://doi.org/10.1093/restud/rdaa081

Cosmides, L., & Tooby, J. (1992). Cognitive Adaptations for Social Exchange. In J. H. Barkow, L. Cosmides, & J. Tooby (Eds.), *The adapted mind: Evolutionary psychology and the generation of culture* (pp. 163–228). Oxford University Press. https://doi.org/10.1093/oso/9780195060232.003.0004

Cosmides, L. & Tooby, J. (1997). Evolutionary psychology: A Primer. Accessed 12/23/2023 at: https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=535c78e674ff682e02ac0da212569e90c6dabb29

Cosmides, L., & Tooby, J. (2010). Groups in mind: The coalitional roots of war and morality. In H. Høgh-Olesen (Ed.), *Human morality and sociality: Evolutionary and comparative perspectives* (pp. 91–234). Palgrave-Macmillan.

Cowen, T. (2018). *Stubborn attachments: A vision for a society of free, prosperous, and responsible individuals*. Stripe Press.

Cox, M.W., and Alm, R. (1992). *The churn: The paradox of Progress*. Annual Report. Federal Reserve Bank of Dallas.

Cox, M. W., & Alm, R. (1999). *Myths of rich and poor: Why we're better off than we think*. Basic Books.

Coyne, C. J., Coyne, R., Miller, R. C. B., Siebert, S., Bourne, R., Robinson, C., Wellings, R., Booth, P., Davies, S., Schwartz, S., & Snowdon, C. (2015). *Flaws and ceilings: Price controls and the damage they cause*. Institute of Economic Affairs Monographs, Hobart Paperback 179. https://ssrn.com/abstract=3123729

Curry, O. S., Mullins, D. A., & Whitehouse, H. (2019). Is it good to cooperate? Testing the theory of morality-as-cooperation in 60 societies. *Current Anthropology*, *60*(1), 47–69. https://doi.org/10.1086/701478

Cusimano, C., Zorrilla, N., Danks, D., & Lombrozo, T. (2021). Reason-based constraint in theory of mind. *Proceedings of the Annual Meeting of the Cognitive Science Society*, *43*, 105-11.

Dana, J., Newman, G., & Voichek, G. (2023). *Efficiency neglect: Why people are pessimistic about the effects of increasing population*. Working paper. Yale School of Management.

Darke, P. R., & Ritchie, R. J. (2007). The defensive consumer: Advertising deception, defensive processing, and distrust. *Journal of Marketing Research*, *44*(1), 114–127. https://doi.org/10.1509/jmkr.44.1.114

Davidai, S., & Gilovich, T. (2015). Building a more mobile America - one income quintile at a time. *Perspectives on Psychological Science*, *10*, 60–71. https://doi.org/10.1177/1745691614562005

Davidai, S., & Ongis, M. (2019). The politics of zero-sum thinking: The relationship between political ideology and the belief that life is a zero-sum game. *Science Advances*, *5*(12), eaay3761. https://doi.org/10.1126/sciadv.aay3761

Davidai, S., & Tepper, S. J. (2023). The psychology of zero-sum beliefs. *Nature Reviews Psychology*, *2*, 472–482. https://doi.org/10.1038/s44159-023-00194-9

Diehl, E., & Sterman, J. D. (1995). Effects of feedback complexity on dynamic decision making. *Organizational Behavior and Human Decision Processes*, *62*(2), 198–215.

Bruine de Bruin, W., Van der Klaauw, W., Topa, G., Downs, J. S., Fischhoff, B., & Armantier, O. (2012). The effect of question wording on consumers' reported inflation expectations. *Journal of Economic Psychology*, *33*(4), 749–757. https://doi.org/10.1016/j.joep.2012.02.001

Deaton, A. (2015). *The great escape: Health, wealth, and the origins of inequality*. Princeton University Press.

DeCelles, K. A., & Norton, M. I. (2016). Physical and situational inequality on airplanes predicts air rage. *Proceedings of the National Academy of Sciences*, *113*(20), 5588–5591. https://doi.org/10.1073/pnas.1521727113

Deighton, J. (2007). From the editor: The territory of consumer research: Walking the fences. *Journal of Consumer Research*, *34*(3), 279–282. https://doi.org/10.1086/522653

DellaVigna, S., & Gentzkow, M. (2019). Uniform pricing in us retail chains. *The Quarterly Journal of Economics*, *134*(4), 2011–2084. https://doi.org/10.1093/qje/qjz019

Delton, A. W., Cosmides, L., Guemo, M., Robertson, T. E., & Tooby, J. (2012). The psychosemantics of free riding: Dissecting the architecture of a moral concept. *Journal of Personality and Social Psychology*, *102*(6), 1252–1270. https://doi.org/10.1037/a0027026

Diamond, R., McQuade, T., & Qian, F. (2019). The effects of rent control expansion on tenants, landlords, and inequality: Evidence from San

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Francisco. *American Economic Review*, *109*(9), 3365–3394. https://doi.org/10.1257/aer.20181289

Dietvorst, B. J., Simmons, J. P., & Massey, C. (2015). Algorithm aversion: People erroneously avoid algorithms after seeing them err. *Journal of Experimental Psychology: General*, *144*(1), 114–126. https://doi.org/10.1037/xge0000033

Dittmar, H. (1996). In P. Lunt & A. Furnham (Eds.), *Adolescents' economic belief and social class. In economic socialization: The economic beliefs and behaviours of young people* (pp. 69–92). Edward Elgar.

Ehrich, K. R., & Irwin, J. R. (2005). Willful ignorance in the request for product attribute information. *Journal of Marketing Research*, *42*(3), 266–277. https://doi.org/10.1509/jmkr.2005.42.3.266

Ehrlich, P. R. (1968). *The population bomb*. Ballantine Books.

Einhorn, H. J., & Hogarth, R. M. (1978). Confidence in judgment: Persistence of the illusion of validity. *Psychological Review*, *85*(5), 395–416. https://doi.org/10.1037/0033-295X.85.5.395

Eisenstein, E. (2005). *The printing revolution in modern Europe*. Cambridge University Press.

Epley, N., Keysar, B., Van Boven, L., & Gilovich, T. (2004). Perspective taking as egocentric anchoring and adjustment. *Journal of Personality and Social Psychology*, *87*(3), 327–339. https://doi.org/10.1037/0022-3514.87.3.327

Erickson, K. (1994). *Interview with Alan S*. The Region. Federal Reserve Bank of Minneapolis, issue Dec.

Esses, V. M., Dovidio, J. F., Jackson, L. M., & Armstrong, T. L. (2001). The immigration dilemma: The role of perceived group competition, ethnic prejudice, and national identity. *Journal of Social Issues*, *57*(3), 389–412.

Evangelidis, I., Jung, M., & Moon, A. (2022). *When willingness-to-pay seems irrational: The role of perceived market Price*. https://doi.org/10.2139/ssrn.4294247

Fehr, E., & Henrich, J. (2003). Is strong reciprocity a maladaptation? On the evolutionary foundations of human altruism. In P. Hammerstein (Ed.), *Genetic and cultural evolution of cooperation* (pp. 55–82). MIT Press.

Fehr, E., & Schmidt, K. M. (1999). A theory of fairness, competition, and cooperation. *The Quarterly Journal of Economics*, *114*(3), 817–868. https://doi.org/10.1162/003355399556151

Fernandes, D. (2020). Politics at the mall: The moral foundations of boycotts. *Journal of Public Policy & Marketing*, *39*(4), 494–513. https://doi.org/10.1177/0743915620943178

Finkel, E. J., Bail, C. A., Cikara, M., Ditto, P. H., Iyengar, S., Klar, S., Mason, L., Mcgrath, M. C., Nyhan, B., Rand, D. G., Skitka, L. J., Tucker, J. A., Van Bavel, J. J., Wang, C. S., & Druckman, J. N. (2020). Political sectarianism in America. *Science*, *370*(6516), 533–536. https://doi.org/10.1126/science.abe1715

Fiske, A. P. (1991). *Structures of social life: The four elementary forms of human relations: Communal sharing, authority ranking, equality matching, market pricing*. Free Press.

Fiske, A. P. (1992). The four elementary forms of sociality: Framework for a unified theory of social relations. *Psychological Review*, *99*(4), 689–723. https://doi.org/10.1037/0033-295X.99.4.689

Fiske, S. T., Cuddy, A. J., & Glick, P. (2007). Universal dimensions of social cognition: Warmth and competence. *Trends in Cognitive Sciences*, *11*(2), 77–83. https://doi.org/10.1016/j.tics.2006.11.005

Fiske, A. P., & Rai, T. S. (2014). *Virtuous violence: Hurting and killing to create, sustain, end, and honor social relationships*. Cambridge University Press. https://doi.org/10.1017/CBO9781316104668

Forge, A. (1972). Normative factors in the settlement size of neolithic cultivators (New Guinea). In P. Ucko, R. Tringham, & G. Dimbelby (Eds.), *Man, settlement, and urbanisation* (pp. 363–376). Cambridge, MA: Schenkman Publishing Company.

Frederick, S. (2012). Overestimating others' willingness to pay. *Journal of Consumer Research*, *39*(1), 1–21. https://doi.org/10.1086/662060

Frederick, S., Novemsky, N., Wang, J., Dhar, R., & Nowlis, S. (2009). Opportunity cost neglect. *Journal of Consumer Research*, *36*(4), 553–561. https://doi.org/10.1086/599764

Freund, A., Flynn, F., & O'Connor, K. (2023). Big is bad: Stereotypes about organizational size, profit-seeking, and corporate ethicality. *Personality and Social Psychology Bulletin*. https://doi.org/10.1177/01461672231151791

Frey, B. S., & Meier, S. (2005). Selfish and indoctrinated economists? *European Journal of Law and Economics*, *19*, 165–171. https://doi.org/10.1007/s10657-005-5425-8

Friedman, M., & Stigler, G. (1946). *Roofs or ceilings. The current housing problems, popular essays on current problems*. Irvington-on-Hudson, New York: Foundation for Economic Education.

Furnham, A. (1988). *Lay theories: Everyday explanations for problems in the social sciences*. Pergamon. https://doi.org/10.1016/B978-0-08-032694-8.50014-4

Gao, Z. (2008). Controlling deceptive advertising in China: An overview. *Journal of Public Policy & Marketing*, *27*(2), 165–177. https://doi.org/10.1509/jppm.27.2.165

Gallup. (2023). Economy: Gallup Economic Confidence Index, 1996-2023 (https://news.gallup.com/poll/1609/consumer-views-economy.aspx)

Georgana, S., Healy, P., & Li, N. (2014). Frequency bias in consumers' perceptions of inflation: An experimental study. *European Economic Review*, *67*, 144–158. https://doi.org/10.1016/j.euroecorev.2014.01.014

Gigerenzer, G., & Brighton, H. (2009). Homo heuristicus: Why biased minds make better inferences. *Topics in Cognitive Science*, *1*(1), 107–143. https://doi.org/10.1111/j.1756-8765.2008.01006.x

Gigerenzer, G., & Goldstein, D. G. (1996). Reasoning the fast and frugal way: Models of bounded rationality. *Psychological Review*, *103*(4), 650–669. https://doi.org/10.1037/0033-295X.103.4.650

Gigerenzer, G., Todd, P. M., & The ABC Research Group. (1999). *Simple heuristics that make us smart*. Oxford University Press.

Gneezy, A., Gneezy, U., Riener, G., & Nelson, L. D. (2012). Pay-what-you-want, identity, and self-signaling in markets. *Proceedings of the National Academy of Sciences*, *109*(19), 7236–7240. https://doi.org/10.1073/pnas.1120893109

Goldin, C. (2014). A grand gender convergence: Its last chapter. *American Economic Review*, *104*(4), 1091–1119. https://doi.org/10.1257/aer.104.4.1091

Goodwin, G. P., Piazza, J., & Rozin, P. (2014). Moral character predominates in person perception and evaluation. *Journal of Personality and Social Psychology*, *106*(1), 148–168. https://doi.org/10.1037/a0034726

Gowlett, J. A. J. (1992). Tools—The Paleolithic record. In S. Jones, R. Martin, & D. Pilbeam (Eds.), *The Cambridge encyclopedia of human evolution* (pp. 350–360). Cambridge University Press.

Goya-Tocchetto, D., & Payne, B. K. (2022). How economic inequality shapes thought and action. *Journal of Consumer Psychology*, *32*(1), 146–161. https://doi.org/10.1002/jcpy.1277

Graeber, D., & Wengrow, D. (2021). *The Dawn of everything*. Farrar, Straus and Giroux.

Granulo, A., Fuchs, C., & Puntoni, S. (2019). Psychological reactions to human versus robotic job replacement. *Nature Human Behaviour*, *3*(10), 1062–1069. https://doi.org/10.1038/s41562-019-0670-y

Gromet, D. M., Kunreuther, H., & Larrick, R. P. (2013). Political ideology affects energy-efficiency attitudes and choices. *Proceedings of the National Academy of Sciences*, *110*(23), 9314–9319.

Guenette, J. D. (2020). Price controls: Good intentions, bad outcomes. World Bank Policy Research Working Paper 9212.

Gupta, C., & Makov, T. (2017). How global is my local milk? Evaluating the first-order inputs of "local" milk in Hawai'i. *Agriculture and Human Values*, *34*(3), 619–630. https://doi.org/10.1007/s10460-016-9755-7

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Hagerty, S. F., & Barasz, K. (2020). Inequality in socially permissible consumption. *Proceedings of the National Academy of Sciences*, *117*(25), 14084–14093. https://doi.org/10.1073/pnas.2005475117

Hagerty, S. F., Barasz, K., & Norton, M. I. (2022). Economic inequality shapes judgments of consumption. *Journal of Consumer Psychology*, *32*(1), 162–164. https://doi.org/10.1002/jcpy.1275

Haidt, J. (2008). Morality. *Perspectives on Psychological Science*, *3*(1), 65–72. https://doi.org/10.1111/j.1745-6916.2008.00063.x

Hall, J. C., & Leeson, P. T. (2007). Good for the goose, bad for the gander: International labor standards and comparative development. *Journal of Labor Research*, *28*, 658–676. https://doi.org/10.1007/s12122-007-9017-y

Harris, J. A., Boyd, R., & Wood, B. M. (2021). The role of causal knowledge in the evolution of traditional technology. *Current Biology*, *31*(8), 1798–1803.e3. https://doi.org/10.1016/j.cub.2021.01.096

Harrison, A., & Scorse, J. (2010). Multinationals and anti-sweatshop activism. *American Economic Review*, *100*(1), 247–273. https://doi.org/10.1257/aer.100.1.247

Haws, K. L., & Bearden, W. O. (2006). Dynamic pricing and consumer fairness perceptions. *Journal of Consumer Research*, *33*(3), 304–311. https://doi.org/10.1086/508435

Hayek, F. A. (1945). The use of knowledge in society. *American Economic Review*, *35*(4), 519–530.

Hegre, H., Oneal, J. R., & Russett, B. (2010). Trade does promote peace: New simultaneous estimates of the reciprocal effects of trade and conflict. *Journal of Peace Research*, *47*(6), 763–774. https://doi.org/10.1177/0022343310385995

Hellebrandt, T., & Mauro, P. (2015). *The future of worldwide income distribution* (Vol. 15-7). *Peterson Institute for international economics working paper*.

Henrich, J. (2009). The evolution of costly displays, cooperation and religion: Credibility enhancing displays and their implications for cultural evolution. *Evolution and Human Behavior*, *30*(4), 244–260. https://doi.org/10.1016/j.evolhumbehav.2009.03.005

Henrich, J. (2016). *The secret of our success: How culture is driving human evolution, domesticating our species, and making us smarter*. princeton University press. https://doi.org/10.1515/9781400873296

Henrich, J. (2021). Cultural evolution: Is causal inference the secret of our success? *Current Biology*, *31*(8), R381–R383. https://doi.org/10.1016/j.cub.2021.02.013

Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H., & McElreath, R. (2001). In search of homo economicus: Behavioral experiments in 15 small-scale societies. *American Economic Review*, *91*(2), 73–78. https://doi.org/10.1257/aer.91.2.73

Henrich, J., Ensminger, J., McElreath, R., Barr, A., Barrett, C., Bolyanatz, A., Cardenas, J. C., Gurven, M., Gwako, E., Henrich, N., Lesorogol, C., Marlowe, F., Tracer, D., & Ziker, J. (2010). Markets, religion, community size, and the evolution of fairness and punishment. *Science*, *327*(5972), 1480–1484. https://doi.org/10.1126/science.1182238

Henrich, J., & McElreath, R. (2012). Dual inheritance theory: The evolution of cultural capacities and cultural evolution. In L. Barrett & R. Dunbar (Eds.), *Oxford Handbook of Evolutionary Psychology* (pp. 555–570). Oxford Academic. https://doi.org/10.1093/oxfordhb/9780198568308.013.0038

Henrich, J., McElreath, R., Barr, A., Ensminger, J., Barrett, C., Bolyanatz, A., Cardenas, J. C., Gurven, M., Gwako, E., Henrich, N., Lesorogol, C., Marlowe, F., Tracer, D., & Ziker, J. (2006). Costly punishment across human societies. *Science*, *312*(5781), 1767–1770. https://doi.org/10.1126/science.1127333

Henrich, J., & Muthukrishna, M. (2021). The origins and psychology of human cooperation. *Annual Review of Psychology*, *72*, 207–240. https://doi.org/10.1146/annurev-psych-081920-042106

Hershfield, H. E., Goldstein, D. G., Sharpe, W. F., Fox, J., Yeykelis, L., Carstensen, L. L., & Bailenson, J. N. (2011). Increasing saving behavior through age-progressed renderings of the future self. *Journal of Marketing Research*, *48*(SPL), S23–S37. https://doi.org/10.1509/jmkr.48.SPL.S23

Hertwig, R., Fischbacher, U., & Bruhin, A. (2013). Simple heuristics in a social game. In *Simple heuristics in a social world* (pp. 39–65). Oxford University Press.

Hickel, J., Kallis, G., Jackson, T., O'Neill, D. W., Schor, J. B., Steinberger, J. K., Victor, P. A., & Ürge-Vorsatz, D. (2022). Degrowth can work—here's how science can help. *Nature*, *612*(7940), 400–403. https://doi.org/10.1038/d41586-022-04412-x

Hill, R. P., & Sharma, E. (2020). Consumer vulnerability. *Journal of Consumer Psychology*, *30*(3), 551–570. https://doi.org/10.1002/jcpy.1161

Hiscox, M. J. (2006). Through a glass and darkly: Attitudes toward international trade and the curious effects of issue framing. *International Organization*, *60*(3), 755–780. https://doi.org/10.1017/S0020818306060255

Horowitz, J. (2022). Degrowth: A dangerous idea or the answer to the World's biggest crisis. *CNN Business*. 15 Nov.

Hydock, C., Paharia, N., & Blair, S. (2020). Should your brand pick a side? How market share determines the impact of corporate political advocacy. *Journal of Marketing Research*, *57*(6), 1135–1151. https://doi.org/10.1177/0022243720947682

IGM Forum. (2012). *Free trade*. IGM Economic Experts Panel. Available at: https://www.kentclarkcenter.org/surveys/free-trade/

IGM Forum. (2022). *Price gouging*. IGM Economic Experts Panel. Available at: https://www.kentclarkcenter.org/surveys/price-gouging-2/

Inglehart, R. F. (2018). *Cultural evolution: People's motivations are changing, and reshaping the world*. Cambridge University Press. https://doi.org/10.1017/9781108613880

Inglehart, R. F., & Welzel, C. (2005). *Modernization, cultural change, and democracy: The human development sequences*. Cambridge University Press.

Inman, J. J., Campbell, M. C., Kirmani, A., & Price, L. L. (2018). Our vision for the journal of consumer research: It's all about the consumer. *Journal of Consumer Research*, *44*(5), 955–959. https://doi.org/10.1093/jcr/ucx123

Inzlicht, M., Shenhav, A., & Olivola, C. Y. (2018). The effort paradox: Effort is both costly and valued. *Trends in Cognitive Sciences*, *22*(4), 337–349. https://doi.org/10.1016/j.tics.2018.01.007

Irwin, J. R., & Naylor, R. W. (2009). Ethical decisions and response mode compatibility: Weighting of ethical attributes in consideration sets formed by excluding versus including product alternatives. *Journal of Marketing Research*, *46*(2), 234–246. https://doi.org/10.1509/jmkr.46.2.234

Isaac, M. S. (2023). The cure effect: Individuals demand universal access for health treatments that claim to eliminate disease symptoms. *Journal of Experimental Psychology. Applied*, *29*, 544–556. https://doi.org/10.1037/xap0000479

Jachimowicz, J. M., Davidai, S., Goya-Tocchetto, D., Szaszi, B., Day, M. V., Tepper, S. J., Phillips, L. T., Mirza, M. U., Ordabayeva, N., & Hauser, O. P. (2022). Inequality in researchers' minds: Four guiding questions for studying subjective perceptions of economic inequality. *Journal of Economic Surveys*, *37*(5), 1534-1561.

Jacoby, J., & Small, C. (1975). The FDA approach to defining misleading advertising. *Journal of Marketing*, *39*, 65–73.

Johnson, S., Zhang, J., & Keil, F. (2019). *Consumers' beliefs about the effects of trade*. https://doi.org/10.2139/ssrn.3376248

Johnson, S. G. B., Zhang, J., & Keil, F. C. (2022). Win-win denial: The psychological underpinnings of zero-sum thinking. *Journal of Experimental Psychology: General*, *151*, 455–474. https://doi.org/10.1037/xge0001083

Jones, C. I. (2001). Was an industrial revolution inevitable? Economic growth over the very long run. *The BE Journal of Macroeconomics*, *1*(2), 153460131028. https://doi.org/10.2202/1534-6013.1028

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Jung, M. H., Moon, A., & Nelson, L. D. (2020). Overestimating the valuations and preferences of others. *Journal of Experimental Psychology: General*, *149*(6), 1193–1214. https://doi.org/10.1037/xge0000700

Kahneman, D. (2003). Maps of bounded rationality: Psychology for behavioral economics. *American Economic Review*, *93*(5), 1449–1475. https://doi.org/10.1257/000282803322655392

Kahneman, D. (2011). *Thinking, fast and slow*. Farrar, Straus and Giroux.

Kahneman, D., & Frederick, S. (2002). Representativeness revisited: Attribute substitution in intuitive judgment. *Heuristics and Biases: the Psychology of Intuitive Judgment*, *49*(49–81), 74.

Kahneman, D., Knetsch, J. L., & Thaler, R. (1986). Fairness as a constraint on profit seeking: Entitlements in the market. *The American Economic Review*, *76*(4) 728–741.

Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica*, *47*(2), 263–291. https://doi.org/10.2307/1914185

Kahneman, D., & Tversky, A. (1984). Choices, values, and frames. *American Psychologist*, *39*(4), 341–350. https://doi.org/10.1037/0003-066X.39.4.341

Kaiser, M. K., Proffitt, D. R., & McCloskey, M. (1985). The development of beliefs about falling objects. *Perception & Psychophysics*, *38*(6), 533–539. https://doi.org/10.3758/BF03207062

Kasser, T., Cohn, S., Kanner, A. D., & Ryan, R. M. (2007). Some costs of American corporate capitalism: A psychological exploration of value and goal conflicts. *Psychological Inquiry*, *18*(1), 1–22. https://doi.org/10.1080/10478400701386579

Kearney, A. T. (2013). *Buying into the local food movement*. National Restaurant Association's 2014 Restaurant Industry Forecast.

Keil, F. C. (2010). The feasibility of folk science. *Cognitive Science*, *34*(5), 826–862. https://doi.org/10.1111/j.1551-6709.2010.01108.x

Kelly, R. L. (1995). *The foraging spectrum: Diversity in hunter-gatherer lifeways*. Smithsonian Institution Press.

Kiatpongsan, S., & Norton, M. I. (2014). How much (more) should CEOs make? A universal desire for more equal pay. *Perspectives on Psychological Science*, *9*(6), 587–593. https://doi.org/10.1177/1745691614549773

Kirgios, E. L., Chang, E. H., Levine, E. E., Milkman, K. L., & Kessler, J. B. (2020). Forgoing earned incentives to signal pure motives. *Proceedings of the National Academy of Sciences*, *117*(29), 16891–16897. https://doi.org/10.1073/pnas.2000065117

Klayman, J. (1995). Varieties of confirmation bias. In J. Busemeyer, R. Hastie, & D. L. Medin (Eds.), *Decision making from a cognitive perspective* (pp. 365–418). Academic Press.

Kling, A. (2023). *The intention heuristic and non-profits*. Blog post retrieved from: https://arnoldkling.substack.com/p/the-intention-heuristic

Klotz, L., Weber, E., Johnson, E., Shealy, T., Hernandez, M., & Gordon, B. (2018). Beyond rationality in engineering design for sustainability. *Nature Sustainability*, *1*(5), 225–233. https://doi.org/10.1038/s41893-018-0054-8

Koch, A., Imhoff, R., Dotsch, R., Unkelbach, C., & Alves, H. (2016). The ABC of stereotypes about groups: Agency/socioeconomic success, conservative-progressive beliefs, and communion. *Journal of Personality and Social Psychology*, *110*, 675–709. https://doi.org/10.1037/pspa0000046

Kraus, M., Onyeador, I., Daumeyer, N., Rucker, J., & Richeson, J. (2019). The misperception of racial economic inequality. *Perspectives on Psychological Science*, *14*, 1–23. https://doi.org/10.1177/1745691619863049

Kremer, M. (1993). Population growth and technological change: One million BC to 1990. *The Quarterly Journal of Economics*, *108*(3), 681–716. https://doi.org/10.2307/2118405

Kristof, N. D. (2009). Where sweatshops are a dream. *The New York Times*, (January 15).

Kristofferson, K., White, K., & Peloza, J. (2014). The nature of slacktivism: How the social observability of an initial act of token support affects subsequent prosocial action. *Journal of Consumer Research*, *40*(6), 1149–1166. https://doi.org/10.1086/674137

Krugman, P. (1997). *In praise of cheap labor*. *Slate*, (March 21).

Krugman, P. (2011). Ricardo's difficult idea. Accessed 12/23/2023 at: https://web.mit.edu/krugman/www/ricardo.htm

Kuran, T. (2004). Why the Middle East is economically underdeveloped: Historical mechanisms of institutional stagnation. *Journal of Economic Perspectives*, *18*(3), 71–90. https://doi.org/10.1257/0895330042162421

Lakner, C., & Milanovic, B. (2015). Global income distribution from the fall of the Berlin Wall to the great recession. *Revista de Economía Institucional*, *17*(32), 71–128.

Larrick, R. P., & Soll, J. B. (2008). The MPG illusion. *Science*, *320*(5883), 1593–1594. https://doi.org/10.1126/science.1154983

Lavoie, M. (1994). A post Keynesian approach to consumer choice. *Journal of Post Keynesian Economics*, *16*(4), 539–562. https://doi.org/10.1080/01603477.1994.11489999

Lee, J. W., & Pyun, J. H. (2016). Does trade integration contribute to peace? *Review of Development Economics*, *20*(1), 327–344. https://doi.org/10.1111/rode.12222

Legrenzi, P., Girotto, V., & Johnson-Laird, P. N. (1993). Focusing in reasoning and decision making. *Cognition*, *49*(1–2), 37–66. https://doi.org/10.1016/0010-0277(93)90035-T

Leiser, D., Duani, N., & Wagner-Egger, P. (2017). The conspiratorial style in lay economic thinking. *PLoS ONE*, *12*(3), e0171238. https://doi.org/10.1371/journal.pone.0171238

Leiser, D., & Halachmi, R. B. (2006). Children's understanding of market forces. *Journal of Economic Psychology*, *27*(1), 6–19. https://doi.org/10.1016/j.joep.2005.06.008

Leiser, D., & Shemesh, Y. (2018). *How we misunderstand economics and why it matters: The psychology of bias, distortion and conspiracy*. Routledge. https://doi.org/10.4324/9781315675343

Levitt, S. D. (2007). "*Shrimponomics*." blog post at freakonomics blog. https://freakonomics.com/2007/08/shrimponomics/

Liaukonytė, J., Tuchman, A., & Zhu, X. (2023). Frontiers: Spilling the beans on political consumerism: Do social media boycotts and buycotts translate to real sales impact? *Marketing Science*, *42*(1), 11–25. https://doi.org/10.1287/mksc.2022.1386

Lin-Healy, F., & Small, D. A. (2012). Cheapened altruism: Discounting personally affected prosocial actors. *Organizational Behavior and Human Decision Processes*, *117*(2), 269–274. https://doi.org/10.1016/j.obhdp.2011.11.006

Loewenstein, G., & Chater, N. (2017). Putting nudges in perspective. *Behavioural Public Policy*, *1*(1), 26–53. https://doi.org/10.1017/bpp.2016.7

Logg, J. M., Minson, J. A., & Moore, D. A. (2019). Algorithm appreciation: People prefer algorithmic to human judgment. *Organizational Behavior and Human Decision Processes*, *151*, 90–103. https://doi.org/10.1016/j.obhdp.2018.12.005

Longoni, C., Bonezzi, A., & Morewedge, C. K. (2019). Resistance to medical artificial intelligence. *Journal of Consumer Research*, *46*(4), 629–650. https://doi.org/10.1093/jcr/ucz013

Louis, W. R., Esses, V. M., & Lalonde, R. N. (2013). National identification, perceived threat, and dehumanization as antecedents of negative attitudes toward immigrants in Australia and Canada. *Journal of Applied Social Psychology*, *43*(Suppl 2), E156–E165.

Luchs, M. G., Naylor, R. W., Irwin, J. R., & Raghunathan, R. (2010). The sustainability liability: Potential negative effects of ethicality on product preference. *Journal of Marketing*, *74*(5), 18–31. https://doi.org/10.1509/jmkg.74.5.018

Lunt, P., & Furnham, A. (1996). *Economic socialization*. Edward Elgar Publishing.

Lusk, J. L., & Norwood, B. (2011). The Locavore's dilemma: Why pineapples Shouldn't be grown in North Dakota. *Econlib Articles*. Retrieved

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

10/21/23 at: https://www.econlib.org/library/Columns/y2011/LuskNorwoodlocavore.html

MacAskill, W. (2022). *What we owe the future*. Basic books.

MacInnis, D. J., & Folkes, V. S. (2010). The disciplinary status of consumer behavior: A sociology of science perspective on key controversies. *Journal of Consumer Research*, *36*(6), 899–914. https://doi.org/10.1086/644610

Maddison, A. (2007). *The world economy*. Academic Foundation.

Makov, T., & Newman, G. E. (2016). Economic gains stimulate negative evaluations of corporate sustainability initiatives. *Nature Climate Change*, *6*(9), 844–846. https://doi.org/10.1038/nclimate3033

Martin, K. D., & Paul Hill, R. (2012). Life satisfaction, self-determination, and consumption adequacy at the bottom of the pyramid. *Journal of Consumer Research*, *38*(6), 1155–1168. https://doi.org/10.1086/661528

Marx, K. (1904). *A contribution to the critique of political economy*. CH Kerr.

Mas-Colell, A., Whinston, M. D., & Green, J. R. (1995). *Microeconomic theory. OUP catalogue*. Oxford University Press.

Maynard Smith, J., & Szathmary, E. (1999). *The origins of life: From the birth of life to the origin of language*. Oxford University Press. https://doi.org/10.1093/oso/9780198504931.001.0001

McCaffery, E. J., & Baron, J. (2006). Isolation effects and the neglect of indirect effects of fiscal policies. *Journal of Behavioral Decision Making*, *19*(4), 289–302. https://doi.org/10.1002/bdm.525

McCloskey, M. (1983). Intuitive physics. *Scientific American*, *248*(4), 122–131. https://doi.org/10.1038/scientificamerican0483-122

McCloskey, D. N. (1990). *If you're so smart: The narrative of economic expertise*. University of Chicago Press.

McCloskey, D. N. (2019). *Why liberalism works: How true liberal values produce a freer, more equal, prosperous world for all*. Yale University Press.

McCloskey, M., Caramazza, A., & Green, B. (1980). Curvilinear motion in the absence of external forces: Naïve beliefs about the motion of objects. *Science*, *210*(4474), 1139–1141. https://doi.org/10.1126/science.210.4474.1139

McCloskey, M., Washburn, A., & Felch, L. (1983). Intuitive physics: The straight-down belief and its origin. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *9*(4), 636–649.

McGraw, A. P., Schwartz, J. A., & Tetlock, P. E. (2012). From the commercial to the communal: Reframing taboo trade-offs in religious and pharmaceutical marketing. *Journal of Consumer Research*, *39*(1), 157–173. https://doi.org/10.1086/662070

Mees, H., & Franses, P. H. (2014). Are individuals in China prone to money illusion? *Journal of Behavioral and Experimental Economics*, *51*, 38–46. https://doi.org/10.1016/j.socec.2014.03.003

Mirzaei, A., Wilkie, D. C., & Siuki, H. (2022). Woke brand activism authenticity or the lack of it. *Journal of Business Research*, *139*, 1–12. https://doi.org/10.1016/j.jbusres.2021.09.044

von Mises, L. (1920). Economic accounting in the socialist community. *Archives of Social Science and Social Policy*, *47*(1), 86–121.

Mohan, B., Schlager, T., Deshpandé, R., & Norton, M. I. (2018). Consumers avoid buying from firms with higher CEO-to-worker pay ratios. *Journal of Consumer Psychology*, *28*(2), 344–352. https://doi.org/10.1002/jcpy.1033

Mokyr, J. (2017). *A culture of growth: The origins of the modern economy*. Princeton University Press. https://doi.org/10.1515/9781400882915

Moorman, C. (2020). Brand activism in a political world. *Journal of Public Policy & Marketing*, *39*(4), 388–392.

Morton, F. M. S. (2001). The problems of price controls. *Regulation*, *24*, 50.

Munger, M. (2007). *They clapped: Can Price-gouging Laws prohibit scarcity*. The Library of Economics and Liberty. http://www.econlib.org/library/Columns/y2007/Mungergouging.html

Muthukrishna, M., Francois, P., Pourahmadi, S., & Henrich, J. (2017). Corrupting cooperation and how anti-corruption strategies may backfire. *Nature Human Behaviour*, *1*(7), 0138. https://doi.org/10.1038/s41562-017-0138

Naudé, W. (2023). *Melancholy hues: The futility of Green growth and degrowth, and the inevitability of societal collapse*. IZA Discussion Paper No. 16139. https://doi.org/10.2139/ssrn.4450972

Nestle, M. (2019). *Food politics: How the food industry influences nutrition and health*. University of California Press. https://doi.org/10.1525/9780520955066

Newcomb, S. (1893). The problem of economic education. *The Quarterly Journal of Economics*, *7*(4), 375–399. https://doi.org/10.2307/1882282

Newman, G. E., & Cain, D. M. (2014). Tainted altruism: When doing some good is evaluated as worse than doing no good at all. *Psychological Science*, *25*(3), 648–655. https://doi.org/10.1177/0956797613504785

Norenzayan, A., Shariff, A., Gervais, W., Willard, A., McNamara, R., Slingerland, E., & Henrich, J. (2016). The cultural evolution of prosocial religions. *Behavioral and Brain Sciences*, *39*, e1. https://doi.org/10.1017/S0140525X14001356

Norris, P., & Inglehart, R. (2011). *Sacred and secular: Religion and politics worldwide*. Cambridge University Press. https://doi.org/10.1017/CBO9780511894862

Norton, M. I., & Ariely, D. (2011). Building a better America—One wealth quintile at a time. *Perspectives on Psychological Science*, *6*(1), 9–12. https://doi.org/10.1177/1745691610393524

O'Donnell, M., & Evers, E. R. (2019). Preference reversals in willingness to pay and choice. *Journal of Consumer Research*, *45*(6), 1315–1330. https://doi.org/10.1093/jcr/ucy052

Olivola, C. Y., & Shafir, E. (2013). The martyrdom effect: When pain and effort increase prosocial contributions. *Journal of Behavioral Decision Making*, *26*(1), 91–105. https://doi.org/10.1002/bdm.767

Olson, J. G., McFerran, B., Morales, A. C., & Dahl, D. W. (2016). Wealth and welfare: Divergent moral reactions to ethical consumer choices. *Journal of Consumer Research*, *42*(6), 879–896. https://doi.org/10.1093/jcr/ucv096

Orben, A. (2020). The Sisyphean cycle of technology panics. *Perspectives on Psychological Science*, *15*(5), 1143–1157. https://doi.org/10.1177/1745691620919372

Ordabayeva, N., & Lisjak, M. (2022). Perceiving, coping with, and changing economic inequality in the marketplace. *Journal of Consumer Psychology*, *32*(1), 165–174. https://doi.org/10.1002/jcpy.1276

O'Roark, J. B., & Wood, W. C. (2011). Determinants of congressional minimum wage support: The role of economic education. *Public Choice*, *147*, 209–225. https://doi.org/10.1007/s11127-010-9617-6

Paharia, N. (2020). Who receives credit or blame? The effects of made-to-order production on responses to unethical and ethical company production practices. *Journal of Marketing*, *84*(1), 88–104. https://doi.org/10.1177/0022242919887161

Paharia, N., Vohs, K. D., & Deshpandé, R. (2013). Sweatshop labor is wrong unless the shoes are cute: Cognition can both help and hurt moral motivated reasoning. *Organizational Behavior and Human Decision Processes*, *121*(1), 81–88. https://doi.org/10.1016/j.obhdp.2013.01.001

Panchanathan, K., & Boyd, R. (2003). A tale of two defectors: The importance of standing for evolution of indirect reciprocity. *Journal of Theoretical Biology*, *224*(1), 115–126. https://doi.org/10.1016/S0022-5193(03)00154-1

Pang, M. F., & Marton, F. (2003). Beyond "lesson study": Comparing two ways of facilitating the grasp of some economic concepts. *Instructional Science*, *31*, 175–194. https://doi.org/10.1023/A:1023280619632

Peloza, J., White, K., & Shang, J. (2013). Good and guilt-free: The role of self-accountability in influencing preferences for products with ethical attributes. *Journal of Marketing*, *77*(1), 104–119. https://doi.org/10.1509/jm.11.0454

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Peracchio, L. A., Luce, M. F., & McGill, A. L. (2014). Building bridges for an interconnected field of consumer research. *Journal of Consumer Research*, *40*(6), v-viii. https://doi.org/10.1086/675854

Persson, E., & Tinghög, G. (2020). Opportunity cost neglect in public policy. *Journal of Economic Behavior and Organization*, *170*, 301–312. https://doi.org/10.1016/j.jebo.2019.12.012

Pew Research Center. (2006). "*Once again, the future Ain't what it used to be*." https://www.pewresearch.org/social-trends/2006/05/02/once-again-the-future-aint-what-it-used-to-be/

Pew Research Center. (2017). "*Public divided on prospects for the next generation*." https://www.pewresearch.org/global/2017/06/05/2-public-divided-on-prospects-for-the-next-generation/#americans-canadians-and-europeans-generally-pessimistic

Pew Research Center. (2019). "*Looking to the future, public sees an America in decline on many fronts*." https://www.luminafoundation.org/resource/looking-to-the-future-public-sees-an-america-in-decline-on-many-fronts/

Phau, I., Teah, M., & Chuah, J. (2015). Consumer attitudes towards luxury fashion apparel made in sweatshops. *Journal of Fashion Marketing and Management*, *19*(2), 169–187. https://doi.org/10.1108/JFMM-01-2014-0008

Piper, K. (2021). Can we save the planet by shrinking the economy. *Vox*, (3 August).

Pisani, B. (2014). Oil below $80: Why that's bad news. CNBC. accessed December 23, 2023: https://finance.yahoo.com/news/oil-below-80-why-thats-142642091.html

Polanyi, K. (1944). *The great transformation: The political and economic origin of our time*. Beacon Press.

Powell, B. (2014). *Out of poverty: Sweatshops in the global economy*. Cambridge University Press. https://doi.org/10.1017/CBO9781139342704

Powell, B., & Skarbek, D. (2006). Sweatshops and third world living standards: Are the jobs worth the sweat? *Journal of Labor Research*, *27*(2), 263–274. https://doi.org/10.1007/s12122-006-1006-z

Powell, B., & Zwolinski, M. (2012). The ethical and economic case against sweatshop labor: A critical assessment. *Journal of Business Ethics*, *107*, 449–472. https://doi.org/10.1007/s10551-011-1058-8

Rand, D. G. (2016). Cooperation, fast and slow: Meta-analytic evidence for a theory of social heuristics and self-interested deliberation. *Psychological Science*, *27*(9), 1192–1206. https://doi.org/10.1177/0956797616654455

Reczek, R. W., Irwin, J. R., Zane, D. M., & Ehrich, K. R. (2018). That's not how I remember it: Willfully ignorant memory for ethical product attribute information. *Journal of Consumer Research*, *45*(1), 185–207. https://doi.org/10.1093/jcr/ucx120

Reich, B. J., Beck, J. T., & Price, J. (2018). Food as ideology: Measurement and validation of locavorism. *Journal of Consumer Research*, *45*(4), 849–868.

Ribstein, L. E. (2012). Wall street and vine: Hollywood's view of business. *Managerial and Decision Economics*, *33*(4), 211–248. https://doi.org/10.1002/mde.2544

Ricardo, D. (1817). *On the principles of political economy and taxation. London: John Murray*. (Reprinted 1966 in *The Works and Correspondence of David Ricardo, Vol 1: Principles of Political Economy and Taxation*, edited by P. Sraffa. London: Cambridge University Press).

Ridley, M. (2020). *How innovation works: And why it flourishes in freedom*. Harper.

Roberts, R., & Davidai, S. (2022). The psychology of asymmetric zero-sum beliefs. *Journal of Personality and Social Psychology*, *123*(3), 559–575. https://doi.org/10.1037/pspi0000378

Romer, P. M. (1990). Endogenous technological change. *Journal of Political Economy*, *98*(5, Part 2), S71–S102. https://doi.org/10.1086/261725

Romer, P. M. (1994). The origins of endogenous growth. *Journal of Economic Perspectives*, *8*(1), 3–22. https://doi.org/10.1257/jep.8.1.3

Roser, M. (2017). *The history of global economic inequality*. Available online at: https://ourworldindata.org/the-history-of-global-economic-inequality

Roser, M. (2022). *The history of the end of poverty has just begun*. Available online at: https://ourworldindata.org/history-of-poverty-has-just-begun

Rosset, E. (2008). It's no accident: Our bias for intentional explanations. *Cognition*, *108*(3), 771–780. https://doi.org/10.1016/j.cognition.2008.07.001

Rotman, J. D., Khamitov, M., & Connors, S. (2018). Lie, cheat, and steal: How harmful brands motivate consumers to act unethically. *Journal of Consumer Psychology*, *28*(2), 353–361. https://doi.org/10.1002/jcpy.1002

Rotondi, V., & Stanca, L. (2015). The effect of particularism on corruption: Theory and empirical evidence. *Journal of Economic Psychology*, *51*, 219–235. https://doi.org/10.1016/j.joep.2015.09.008

Rozenblit, L., & Keil, F. (2002). The misunderstood limits of folk science: An illusion of explanatory depth. *Cognitive Science*, *26*(5), 521–562. https://doi.org/10.1207/s15516709cog2605_1

Rubin, P. H. (2003). Folk economics. *Southern Economic Journal*, *70*(1), 157–171.

Rubin, P. H. (2014). Emporiophobia (fear of markets): Cooperation or competition. *Southern Economic Journal*, *80*(4), 875–889. https://doi.org/10.4284/0038-4038-2013.287

Russo, J. E., Metcalf, B. L., & Stephens, D. (1981). Identifying misleading advertising. *Journal of Consumer Research*, *8*(2), 119–131. https://doi.org/10.1086/208848

Sachs, J. (2005). *The end of poverty: Economic possibilities for our time*. Penguin Press.

Samuelson, P. A. (1938). A note on the pure theory of consumer's behaviour. *Economica*, *5*(17), 61–71. https://doi.org/10.2307/2548836

Sandel, M. J. (2012). *What money can't buy: The moral limits of markets*. Macmillan.

Sapienza, P., & Zingales, L. (2013). Economic experts versus average Americans. *American Economic Review*, *103*(3), 636–642. https://doi.org/10.1257/aer.103.3.636

Scharber, H., & Dancs, A. (2015). Do locavores have a dilemma? Economic discourse and the local food critique. *Agriculture and Human Values*, *33*, 121–133.

Schlager, T., Mohan, B., DeCelles, K., & Norton, M. (2021). Consumers—Especially women—Avoid buying from firms with higher gender pay gaps. *Journal of Consumer Psychology*, *31*(3), 518–531. https://doi.org/10.1002/jcpy.1219

Schlosser, E. (2012). *Fast food nation: The dark side of the all-American meal*. Houghton Mifflin Harcourt.

Schultze, C. L. (1977). *The public use of private interest*. The Brookings Institution.

Schumpeter, J. A. (1942). *Capitalism, socialism and democracy*. routledge.

Sen, A. (1979). Personal utilities and public judgements: Or what's wrong with welfare economics. *The Economic Journal*, *89*(355), 537–558. https://doi.org/10.2307/2231867

Sen, A. (1999). *Development as Freedom*. Oxford University Press.

Sen, S., & Bhattacharya, C. B. (2001). Does doing good always lead to doing better? Consumer reactions to corporate social responsibility. *Journal of Marketing Research*, *38*(2), 225–243. https://doi.org/10.1509/jmkr.38.2.225.18838

Shaddy, F., Barasch, A. P., & Bhattacharjee, A. K. (2022). *The psychology of unfair competition: Technological disruption and fixed-cost neglect*. Working paper.

Shaddy, F., & Shah, A. K. (2018). Deciding who gets what, fairly. *Journal of Consumer Research*, *45*(4), 833–848. https://doi.org/10.1093/jcr/ucy029

Shaddy, F., & Shah, A. K. (2022). When to use markets, lines, and lotteries: How beliefs about preferences shape beliefs about allocation. *Journal*

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

of Marketing, *86*(3), 140–156. https://doi.org/10.1177/00222429211012107

Shafir, E., Diamond, P., & Tversky, A. (1997). Money illusion. *The Quarterly Journal of Economics*, *112*(2), 341–374. https://doi.org/10.1162/003355397555208

Shiller, R. J. (2017). Narrative economics. *American Economic Review*, *107*(4), 967–1004. https://doi.org/10.1257/aer.107.4.967

Shugan, S. (2006). Commentary—Antibusiness movies and folk marketing. *Marketing Science*, *25*(6), 681–685. https://doi.org/10.1287/mksc.1060.0250

Simmel, G. (1990). In D. P. Frisby (Ed.), *The philosophy of money*. Routledge.

Simon, H. A. (1955). A behavioral model of rational choice. *The Quarterly Journal of Economics*, *69*, 99–118. https://doi.org/10.2307/1884852

Simon, J. L. (1996). *The ultimate resource*. Princeton University Press. https://doi.org/10.1515/9780691214764

Skitka, L. J. (2010). The psychology of moral conviction. *Social and Personality Psychology Compass*, *4*(4), 267–281. https://doi.org/10.1111/j.1751-9004.2010.00254.x

Sloman, S., & Fernbach, P. (2017). *The knowledge illusion: Why we never think alone*. Riverhead Press.

Slovic, P., Mertz, C. K., Markowitz, D. M., Quist, A., & Västfjäll, D. (2020). Virtuous violence from the war room to death row. *Proceedings of the National Academy of Sciences*, *117*(34), 20474–20482. https://doi.org/10.1073/pnas.2001583117

Smith, A. (1759). *The theory of moral sentiments. History of economic thought books*. McMaster University Archive for the History of Economic Thought. https://doi.org/10.1093/oseo/instance.00042831

Soroka, S., Fournier, P., & Nir, L. (2019). Cross-national evidence of a negativity bias in psychophysiological reactions to news. *Proceedings of the National Academy of Sciences*, *116*(38), 18888–18892. https://doi.org/10.1073/pnas.1908369116

Sowell, T. (1980). *Knowledge and decisions*. Basic Books.

Sowell, T. (2004). *Basic economics: A citizen's guide to the economy*. Basic Books.

Sowell, T. (2012). *"Trickle down" theory and "tax cuts for the rich"*. Hoover Institution Press.

Spiller, S. A. (2011). Opportunity cost consideration. *Journal of Consumer Research*, *38*(4), 595–610. https://doi.org/10.1086/660045

Spunt, R. P., Meyer, M. L., & Lieberman, M. D. (2015). The default mode of human brain function primes the intentional stance. *Journal of Cognitive Neuroscience*, *27*, 1116–1124. https://doi.org/10.1162/jocn_a_00785

Stein, B. (1979). *The view from Sunset Boulevard*. Basic Books.

Stiglitz, J. E., Sen, A., & Fitoussi, J. P. (2009). *Report by the commission on the measurement of economic performance and social progress*.

Stiner, M. C., Munro, N. D., Surovell, T. A., Tchernov, E., & Bar-Yosef, O. (1999). Paleolithic population growth pulses evidenced by small animal exploitation. *Science*, *283*(5399), 190–194. https://doi.org/10.1126/science.283.5399.190

Storr, V. H., & Choi, G. S. (2019). *Do markets corrupt our morals*. Palgrave Macmillan. https://doi.org/10.1007/978-3-030-18416-2

Stringham, E. P. (2010). *Economic value and cost are subjective*. Edward Elgar Publishing. https://doi.org/10.4337/9781849806473.00011

Thaler, R. (1980). Toward a positive theory of consumer choice. *Journal of Economic Behavior & Organization*, *1*(1), 39–60. https://doi.org/10.1016/0167-2681(80)90051-7

Thaler, R. (1985). Mental accounting and consumer choice. *Marketing Science*, *4*(3), 199–214. https://doi.org/10.1287/mksc.4.3.199

The Deloitte Global Millennial Survey. (2019). (https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/deloitte-2019-millennial-survey.pdf)

The Washington Post. February 11, 2009. (2010). "*Tom Vilsack, the new face of agriculture*." Accessed December 23, 2023 at http://www.washingtonpost.com/wp-dyn/content/story/2009/02/10/ST2009021002624.html

Thompson, D. R., & Siegler, R. S. (2000). Buy low, sell high: The development of an informal theory of economics. *Child Development*, *71*(3), 660–677. https://doi.org/10.1111/1467-8624.00174

Thomsen, E. F. (1992). *Prices and knowledge: A market-process perspective*. Routledge.

Trudel, R., & Cotte, J. (2009). Does it pay to be good. *MIT Sloan Management Review*, *50*(2), 61.

Trujillo, A. J., Karmarkar, T., Alexander, C., Padula, W., Greene, J., & Anderson, G. (2020). Fairness in drug prices: Do economists think differently from the public? *Health Economics, Policy, and Law*, *15*(1), 18–29. https://doi.org/10.1017/S1744133118000427

Tully, S. M., & Winer, R. S. (2014). The role of the beneficiary in willingness to pay for socially responsible products: A meta-analysis. *Journal of Retailing*, *90*(2), 255–274.

Turchin, P., Currie, T. E., Whitehouse, H., François, P., Feeney, K., Mullins, D., … Spencer, C. (2018). Quantitative historical analysis uncovers a single dimension of complexity that structures global variation in human social organization. *Proceedings of the National Academy of Sciences*, *115*(2), E144–E151. https://doi.org/10.1073/pnas.1708800115

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, *185*(4157), 1124–1131. https://doi.org/10.1126/science.185.4157.1124

Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, *211*(4481), 453–458. https://doi.org/10.1126/science.7455683

Van Boven, L., Dunning, D., & Loewenstein, G. (2000). Egocentric empathy gaps between owners and buyers: Misperceptions of the endowment effect. *Journal of Personality and Social Psychology*, *79*(1), 66–76. https://doi.org/10.1037/0022-3514.79.1.66

Van der Leeuw, S. (2020). *Social sustainability, past and future: Undoing unintended consequences for the Earth's survival*. Cambridge University Press.

Vohs, K. D., Baumeister, R. F., & Chin, J. (2007). Feeling duped: Emotional, motivational, and cognitive aspects of being exploited by others. *Review of General Psychology*, *11*(2), 127–141. https://doi.org/10.1037/1089-2680.11.2.127

Vohs, K. D., Mead, N. L., & Goode, M. R. (2006). The psychological consequences of money. *Science*, *314*(5802), 1154–1156.

von Mises, L. (1995). *Economic policy: Thoughts for today and tomorrow*. Irvington, NY: Free Market Books.

Vosgerau, J., Scopelliti, I., & Huh, Y. E. (2020). Exerting self-control≠sacrificing pleasure. *Journal of Consumer Psychology*, *30*(1), 181–200. https://doi.org/10.1002/jcpy.1142

Weber, C. L., & Matthews, H. S. (2008). Food-miles and the relative climate impacts of food choices in the United States. *Environmental Science & Technology*, *42*, 3508–3513. https://doi.org/10.1021/es702969f

Weisel, O., & Shalvi, S. (2015). The collaborative roots of corruption. *Proceedings of the National Academy of Sciences*, *112*(34), 10651–10656. https://doi.org/10.1073/pnas.1423035112

White, K., Habib, R., & Hardisty, D. J. (2019). How to SHIFT consumer behaviors to be more sustainable: A literature review and guiding framework. *Journal of Marketing*, *83*(3), 22–49. https://doi.org/10.1177/0022242919825649

Woodburn, J. (1980). Hunters and gatherers today and reconstruction of the past. In *Soviet and Western anthropology* (pp. 95–118). Columbia University Press. https://doi.org/10.7312/gell92894-009

Woolley, K., Kupor, D., & Liu, P. J. (2023). Does company size shape product quality inferences? Larger companies make BetterHigh-tech

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

products, but smaller companies make better low-tech products. *Journal of Marketing Research*, *60*(3), 425–448. https://doi.org/10.1177/00222437221124857

Xia, L., Monroe, K. B., & Cox, J. L. (2004). The price is unfair! A conceptual framework of price fairness perceptions. *Journal of Marketing*, *68*(4), 1–15. https://doi.org/10.1509/jmkg.68.4.1.42733

YouGov. (2015). *What the World Thinks of Capitalism*. Legatum Institute. https://social.shorthand.com/montie/3C6iES9yjf/what-the-world-thinks-of-capitalism.html

Zwolinski, M. (2007). Sweatshops, choice, and exploitation. *Business Ethics Quarterly*, *17*(4), 689–727. https://doi.org/10.5840/beq20071745

Zwolinski, M. (2008). The ethics of price gouging. *Business Ethics Quarterly*, *18*(3), 347–378. https://doi.org/10.5840/beq200818327

How to cite this article: Bhattacharjee, A., & Dana, J. (2024). Lay economic reasoning: An integrative review and call to action. *Consumer Psychology Review*, 1–37. https://doi.org/10.1002/arcp.1096

24761281, 0, Downloaded from https://myscp.onlinelibrary.wiley.com/doi/10.1002/arcp.1096 by JAGIELLONIAN UNIVERSITY, Wiley Online Library on [22/01/2024]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License