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#### **Title**

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#### **Permalink**

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#### **Journal**

Proceedings of the Annual Meeting of the Cognitive Science Society, 40(0)

#### **Authors**

Johnson, Samuel G.B.

Zhang, Jiewen

Keil, Frank C

#### **Publication Date**

2018

# Psychological Underpinnings of Zero-Sum Thinking

Samuel G. B. Johnson<sup>1</sup>, Jiewen Zhang<sup>2</sup>, & Frank C. Keil<sup>3</sup>  
([sgbjohnson@gmail.com](mailto:sgbjohnson@gmail.com), [zjwzhang@ucdavis.edu](mailto:zjwzhang@ucdavis.edu), [frank.keil@yale.edu](mailto:frank.keil@yale.edu))

<sup>1</sup>School of Management, University of Bath, Bath, BA2 7AY UK

<sup>2</sup>Department of Psychology, University of California – Davis, Davis, CA 95616 USA

<sup>3</sup>Department of Psychology, Yale University, New Haven, CT 06520 USA

## Abstract

A core proposition in economics is that voluntary exchanges benefit both parties. We show that people often deny the mutually beneficial nature of exchange, instead using *zero-sum thinking*. Participants read about simple exchanges of goods and services, judging whether each party to the transaction was better off or worse off afterwards. These studies revealed that zero-sum beliefs are pervasive. These beliefs seem to arise in part due to intuitive *mercantilist beliefs* that money has value over-and-above what it can purchase, since buyers are seen as less likely to benefit than sellers, and barterers are often seen as failing to benefit either party (Study 1). Zero-sum beliefs are greatly reduced by giving reasons for the exchange (Study 2), suggesting that a second mechanism underlying zero-sum thinking is a failure to spontaneously take the perspective of the buyer. Implications for politics and business are discussed.

**Keywords:** Intuitive theories; folk psychology; judgment & decision-making; behavioral economics.

## Introduction

If economics has a Fundamental Theorem, it is this: *There are gains from trade—voluntary transactions benefit both parties*. This has been recognized since Adam Smith, who wrote in *The Wealth of Nations* (1776):

[A man] will be far more likely to prevail if he can interest their self-love in his favour, and show them that it is for their own advantage to do for him what he requires of them. Whoever offers to another a bargain of any kind, proposes to do this. Give me that which I want, and you shall have this which you want, is the meaning of every such offer (p. 118–9).

That is, buyers do not buy unless they value the good more than its price, and sellers do not sell unless they value it less. People may not be rational, but nor are they fools—people do not voluntarily give up what they value highly for what they value less. Thus, barring deception or coercion, both parties benefit from exchange.

The notion that trade is positive-sum is endorsed by economists across the political spectrum, from Paul Krugman (1996) to Milton Friedman (1962). The principle of mutually beneficial exchange is an older idea than natural selection, and fully as accepted by experts in the field (Caplan, 2006). For example, 95% of the participants in Chicago Booth’s panel of ideologically diverse economists agreed with the statement, “Freer trade improves productive efficiency and offers consumers better choices, and in the long run these gains are much larger than any effects on employment.”

Despite this consensus among experts, it seems that many people do not appreciate the mutually beneficial nature of exchange. Politicians who promote populist, anti-trade policies enjoy enormous popularity. The casual observer of American politics often hears talk of “losing” at trade, as though the price signals associated with foreign goods are somehow misleading American consumers into zero-sum exchanges at their own expense. Just as ideologically opposite economists agree on the benefits of trade, ideologically opposite politicians agree on its hazards, with populist, anti-trade candidates prominent on both sides of the political spectrum.

Yet, these battles have been fought before—not only by current economists, but also by their predecessors. Smith was writing in opposition to the zero-sum mercantilist philosophy of his day—a now-debunked theory that conceptualized wealth as the accumulation of gold, rather than goods and services. Even though economists have been convinced by Smith’s arguments, battles against mercantilism and trade-protectionism must be fought anew each generation, as Ricardo (2004/1817), Marshall (1949/1879), Friedman (1962), and Krugman (1996) have done in turn. This need to re-learn basic economics anew each generation encourages the hypothesis that zero-sum thinking is psychologically natural, and positive-sum thinking is not—a hypothesis endorsed explicitly by some economists (e.g., Bastiat, 2007/1845; Sowell, 2008).

Our primary question here is when, and to what extent, people believe that one or the other party in an exchange was not made better off. Our two experiments examine three possible mechanisms underlying such beliefs.

First, some evolutionary psychologists (Boyer & Petersen, 2018; Cosmides & Tooby, 1992; Pinker, 2003) and anthropologists (Fiske, 1992) have argued that humans are evolutionarily adapted for like-kind exchanges such as barter. However, because modern exchanges are denominated in currency with no intrinsic value rather than goods, people may have difficulty using their adapted intuitions about exchange when contemplating monetary transactions. In this case, we would expect people to more readily identify positive-sum transactions for barterers than for monetary exchanges.

Second, zero-sum beliefs could originate in how people conceptualize value. Economists since Smith (1776) have labored, with limited success, against mercantilist theories of wealth and trade. Such theories equate wealth with money, neglecting the insight that money is valuable only because it can be used to purchase valuable things. If people are intuitive mercantilists who confuse wealth and

money, then they may view sellers as better off than buyers, because the seller always gains currency while the buyer gives up currency. Barterers, meanwhile, would be seen as failing to benefit either party since money does not change hands. Studies 1 and 2 contrast the predictions made by the misadaptation and mercantilism accounts.

Third, people may fail to spontaneously consider the mental states of the transaction parties. The Fundamental Theorem states that trades are positive-sum because they are voluntary, and people do not choose to exchange at a loss. If people do not spontaneously consider the buyers' and sellers' perspectives, they may fail to realize that buyers and sellers would not choose to exchange if they would be made worse-off. On this hypothesis, people should be more likely to appreciate the benefits of exchange given contexts that facilitate perspective-taking. Study 2 tests this possibility.

### Study 1

Our first experiment directly tested the prevalence of zero-sum thinking. Participants read about simple, everyday transactions, including monetary purchases of goods (e.g., a shirt, a car), monetary purchases of services (e.g., a haircut, a plumber), and barterers of goods (e.g., a McDonald's sandwich for a Burger King sandwich, or soy sauce for vinegar). Participants then rated the welfare of the buyer and seller (or traders, in the case of barter), relative to their welfare before the transaction.

If people understand the underlying principles of economics, they should indicate that both buyer and seller are better off after each transaction, because the transactions are voluntary. On the other hand, if people engage in zero-sum thinking, then they may believe that either the buyer or seller failed to be bettered by the transaction, or even was worse off after the transaction.

The particular pattern of perceived gains and losses is especially useful for testing the underlying mechanisms. If zero-sum thinking occurs primarily due to an evolutionary misadaptation, then barterers should be seen as positive-sum more often than monetary transactions. Conversely, if it occurs due to mercantilist thinking—valuing money over-and-above what it can purchase—then zero-sum beliefs should be prevalent for both types of transactions. For monetary purchases, sellers should be seen as gaining more often than buyers (since sellers gain money and buyers give money). For barterers, the traders would be likely seen as neither better *nor* worse off than before (since money does not change hands).

### Method

We recruited 100 participants from Mechanical Turk. Fourteen participants were excluded from analysis due to incorrect answers to check questions.

Participants read about a series of 12 transactions and were instructed: "For each transaction, you will be asked whether each participant is better off, worse off, or the same, relative to how they were before the transaction."

The transactions were of three types—monetary purchases of goods, monetary purchases of services, and barterers of goods. Four items of each type were used, and the 12 items were presented in a random order.

For the monetary purchases of goods, participants read about transactions, such as, "Sally goes to Tony's clothing store. She pays Tony \$30 for a shirt." (Other goods included olive oil, a car, and a chocolate bar.) Participants were then asked to rate the welfare of the buyer and seller, relative to before the transaction (e.g., "How well off do you think Sally now is?" and "How well off do you think Tony now is?") on a scale anchored at  $-5$  ("Worse than before"),  $0$  ("Same as before"), and  $5$  ("Better than before"). Buyer and seller welfare were rated in a random order for each item. Monetary purchases of services were phrased in a parallel way (e.g., "Eric goes to Paul's barber shop. Eric pays Paul \$15 for a haircut.>").

For the barterers of goods, participants read about two individuals exchanging goods, such as "Vivian goes to her colleague Tommy's office. She trades her Burger King hamburger for Tommy's McDonald's hamburger" or "Mark goes to his neighbor Fred. Mark trades his bottle of soy sauce for Fred's bottle of vinegar." The welfare of each trader was rated on the same scale.

### Results and Discussion

Zero-sum thinking—that is, the belief that one or the other party in a transaction was not bettered by the transaction—was endemic among participants, with 88% of participants indicating that at least one of the twelve transactions was zero- or negative-sum.

**Zero-sum transactions.** We first calculated the number of non-positive-sum interactions for each participant, by adding the perceived welfare of the buyer and seller for each of the 12 transactions. Participants claimed an average of 0.90 ( $SD = 1.11$ ) of 4 monetary purchases of goods and 0.62 ( $SD = 1.04$ ) of 4 monetary purchases of services to be non-positive-sum. Overall, 60.5% of participants indicated that at least one of these eight transactions was non-positive-sum, with somewhat more zero- (or negative-) sum thinking for goods than for services,  $t(85) = 2.58, p = .011, d = 0.26$ .

However, zero-sum thinking was more pervasive yet for barterers. Participants claimed an average of 2.13 ( $SD = 1.50$ ) of 4 barterers to be non-positive-sum, with 79.1% of participants indicating that at least one was non-positive-sum. Consequently, barterers were much more likely to be considered non-positive-sum than purchases of goods,  $t(85) = 7.46, p < .001, d = 0.94$ . This particular pessimism about barterers will be explored more fully below.

**Buyer and seller welfare.** In economics, the idea that voluntary transactions are positive-sum relies on a more basic idea: neither party agrees to a transaction unless it is beneficial. That is, transactions are positive-sum because they are win-win. Our next analysis looked at whether participants believed that individual buyers, sellers, and traders were better-off after transactions (see Table 1).

Indeed, almost every participant (94.2%) believed that at least one individual in one of the twelve transactions failed to gain from the transaction ( $M = 8.49$  out of 24). Although this stark result may be due in part to participants' desire to use the entire scale range, a look at the pattern of scale use below reveals that nonpositive scores were far from randomly distributed.

Table 1: Results of Study 1

	Total	Positive	Zero	Negative
Buyers	8	4.88 (2.72)	0.58 (1.35)	2.54 (2.47)
Sellers	8	7.07 (1.56)	0.44 (1.14)	0.49 (0.86)
Traders	8	3.56 (2.67)	3.29 (2.98)	1.15 (1.36)
Total	24	15.51 (4.29)	4.31 (4.18)	4.17 (3.33)

Note. Entries are the number of times that transaction partners were seen as made better off (positive), no better off (zero), or worse off (negative) after each transaction. SDs in parentheses.

The idea of mercantilism predicts that buyers should often be seen as losing and sellers should often be seen as gaining. This is confirmed by Table 1, where buyers were seen as losing ( $M = 2.54$  out of 8) more than 5 times more often than sellers ( $M = 0.49$  out of 8),  $t(85) = 7.54$ ,  $p < .001$ ,  $d = 1.11$ . This asymmetry held up for both goods and services but was especially pronounced for goods, since consumers were seen as more likely to experience a net loss from purchases of goods rather than services ( $M = 1.48$  vs.  $1.06$  out of 4),  $t(85) = 3.20$ ,  $p = .002$ ,  $d = 0.30$ , perhaps because participants believed there was a higher risk of information asymmetry for the goods (see Akerlof, 1970). Results are similar if the continuous scale is analyzed, rather than the trichotomized recoding.

A second prediction of the mercantilism account is that, while both monetary transactions and barter would often be perceived as zero-sum, the specific pattern would differ. Whereas buyers would be seen as losing and sellers as gaining, neither trader in a barter would be seen as gaining. Consistent with this prediction, Table 1 reveals that traders were often seen as experiencing neither gain nor loss from their trades ( $M = 3.29$  out of 8), and this perception was nearly 6 times more common for traders than for buyers ( $M = 0.58$  out of 8),  $t(85) = 8.59$ ,  $p < .001$ ,  $d = 1.17$ . In fact, this tendency was so common that traders were even more likely than buyers to be seen as non-beneficiaries from their exchanges (i.e., either zero or negative gain),  $t(85) = 3.98$ ,  $p < .001$ ,  $d = 0.49$ , explaining why more barter were seen as non-positive-sum, compared to monetary transactions. Barter are seemingly construed as arbitrary exchanges of goods rather than goal-directed methods of obtaining goods for mutual benefit. Although perhaps it is plausible that only one

party benefited in some cases (e.g., Mark needed soy sauce for a recipe but Fred was indifferent to the trade), the idea that neither party benefited is nonsensical.

**Discussion.** Three results arose consistently. First, virtually all participants believed that some of the individuals failed to gain from their transactions. This is consistent with our suggestion that zero-sum thinking is a natural psychological tendency, supporting claims (e.g., Caplan, 2006; Rubin, 2003) that zero-sum thinking accounts for at least a part of the difference between economists' and laypeople's reasoning about markets.

Second, within monetary transactions, sellers were almost always seen as beneficiaries, whereas buyers were often seen as losers. This way of thinking seems bizarre, because it implies that consumers believe themselves to be acting irrationally when making purchases—if purchases are often net losses, why do consumers make them? Yet, this pattern is consistent with mercantilist theories that equate money and wealth: Apparently Smith (1999/1776) did not fully convince the public.

Third, participants were even likelier to view barter as zero-sum, compared to monetary transactions, because traders were seen as neither gaining nor losing from their barter. This undercuts the idea that zero-sum thinking is due to evolved instincts about exchange: To the extent that our evolutionary ancestors engaged in explicit trades, these would have resembled barter rather than monetary exchanges. On this hypothesis, barter should be *less* often be seen as zero-sum, when we found the opposite.

One possible concern is that participants interpreted the phrases "better off" and "worse off" as referring specifically to monetary health. While it is plausible that this accounts for the particularly high rates of non-beneficiary buyers and traders, this cannot account for all of it. In a follow-up experiment, we phrased the question in terms of whether parties "benefited" from the transaction, finding a similar pattern (more losses for buyers than sellers, few beneficiaries for trades), albeit with higher levels of positivity overall.

An observer of Table 1 might note that many trades were actually seen as positive-sum. This is encouraging. Nonetheless, chance may not be the most appropriate comparison—after all, economic theory tells us that *all* voluntary transactions are positive-sum. For present purposes, we are most interested in establishing the *mechanisms* underlying zero-sum thinking, to whatever extent it exists. Regardless of the overall level, the pattern of zero-sum beliefs strongly indicts mercantilism as a key factor. Next, we look at a second possible factor.

## Study 2

Transactions are win-win specifically because they are *voluntary*, and people do not generally make purchases without believing it to be beneficial. Economists do not need to be reminded of this, but laypeople might. If people do not spontaneously take the buyer's perspective, they may fail to realize that the transaction is unlikely to

harm either party. Thus, Study 2 tested whether giving reasons for buyers' choices would reduce zero-sum thinking by making salient the transactions' voluntariness.

Consumers have many reasons for their purchases. We explored two broad types. Study 2A provided "content reasons"—the sort of reason that might persuade the participant or anyone else to engage in the transaction. For example, a haircut might be welfare-inducing because of the pleasant environment of the location, or a chocolate bar might be worth consuming because the buyer is very hungry. Conversely, Study 2B provided "empty reasons"—merely indicating that the buyer "wanted" the good or service being purchased. These reasons are empty, from an economic perspective, because it is true of every consumer decision that the consumer wanted to purchase the product. Yet these reasons may not be psychologically empty, if they induce the participant to take the perspective of the buyer as a voluntary agent who would not choose to make a purchase at a loss.

## Method

We recruited 100 participants for Study 2A, and another 99 participants for Study 2B ( $N = 26$  excluded in total).

The procedure was the same as Study 1, except that after describing each transaction, a reason was given that the buyer (for monetary transactions) or both traders (for barter) engaged in the transaction.

Study 2A gave reasons with content. For example, for Sally's purchase, participants read that "Sally purchased the shirt because Taylor Swift once wore this kind of shirt at her concert, and Sally loves Taylor Swift very much." For Mark's and Fred's barter, "Mark traded because he needed vinegar for a recipe, and Fred traded because he happened to run out of soy sauce."

Study 2B, in contrast, gave empty reasons, which stated merely that the buyer or traders "wanted" the good or service being exchanged. For example, "Sally made the purchase because she wanted the shirt" and "Mark made the trade because he wanted vinegar and Fred made the trade because he wanted soy sauce."

## Results and Discussion

Whereas in Study 1, most participants (88%) believed that at least one of the transactions was non-positive-sum, this proportion was far lower in Studies 2A (41%) and 2B (39%). Likewise, whereas nearly all participants in Study 1 (94%) believed that at least one individual in one of the transactions failed to benefit, this proportion was more modest in Studies 2A (65%) and 2B (60%). Thus, perspective-taking interventions did not eliminate zero-sum thinking, but did dramatically lower its incidence.

**Within-experiment comparisons.** Study 1 revealed asymmetries between buyers and sellers and between buyers and traders, which we take to support mercantilist thinking. Both effects were also robust in Study 2.

First, buyers in Study 2A were seen as losing ( $M = 0.92$  out of 8) far more often than sellers ( $M = 0.13$  out of 8),

$t(85) = 4.95, p < .001, d = 0.73$ . This was also the case for Study 2B ( $M = 1.06$  vs. 0.24),  $t(86) = 4.08, p < .001, d = 0.56$ . Thus, as in Study 1, judgments of loss flowed with money: Buyers, who gave up money (but gained a good), were seen as losing more often than sellers, who gained money (but gave up a good). To the extent that monetary transactions are seen as zero-sum, it is because sellers are seen as gaining at buyers' expense.

Second, traders in Study 2A were seen as failing to gain ( $M = 0.84$  out of 8) more often than buyers ( $M = 0.45$  out of 8),  $t(85) = 2.01, p = .048, d = 0.25$ . This was also the case for Study 2B ( $M = 1.40$  vs. 0.31),  $t(86) = 3.79, p < .001, d = 0.57$ . As in Study 1, trades of goods were seen somewhat often as failing to benefit either party, whereas this was rarely the case for buyers. This is consistent with the prediction of folk mercantilism that transactions not associated with money should be seen as zero-sum, not because one party is benefitting at the expense of the other, but because neither party's welfare is affected.

Table 2: Comparison of Studies 1 and 2

	Total	Exp. 1	Exp. 2A	Exp. 2B
Buyers	8	3.12 (2.72)	1.37 (1.80)	1.37 (2.23)
Sellers	8	0.93 (1.56)	0.73 (1.47)	0.48 (1.00)
Traders	8	4.44 (2.67)	1.15 (1.94)	1.77 (2.75)
Total	24	8.49 (5.14)	3.26 (4.12)	3.62 (4.72)

*Note.* Entries are the number of times that transaction partners were seen as failing to benefit (either worse off or no better off) after each transaction, across experiments. SDs in parentheses.

**Between-experiment comparisons.** The above analyses show that mercantilism accounts for much of the zero-sum thinking in Study 2, just as in Study 1. But might the overall incidence of zero-sum thinking be lower due to our perspective-taking manipulations?

Table 2 compares the number of times that individuals in each type of transaction are seen as failing to benefit (i.e., either zero or negative gain). Both interventions (content reasons in Study 2A and empty reasons in Study 2B) were about equally effective in reducing zero-sum thinking, with far fewer trades perceived as non-beneficial compared to the unexplained transactions in Study 1.

To explore these effects quantitatively, we compared the number of non-beneficiary buyers and sellers (in monetary transactions) and traders (in barter) across experiments. Studies 2A and 2B produced similar results, despite the different sorts of reasons given. The rates of perceived non-benefit were virtually identical for buyers,  $t(171) = 0.01, p = .99, d < 0.01$ , and the rates of perceived non-benefit were, if anything, even lower for sellers in Study 2B (with empty reasons) than in Study 2A (with

content reasons), although this trend was not significant,  $t(171) = 1.31$ ,  $p = .19$ ,  $d = 0.20$ . The only difference approaching significance was a tendency for barterers to be seen as less beneficial in Study 2B,  $t(171) = 1.71$ ,  $p = .090$ ,  $d = 0.26$ . Because these differences were modest, we collapse across studies for comparison with Study 1.

As shown in Table 2, buyers were far less likely to be seen as non-beneficiaries in Study 2 compared to Study 1,  $t(257) = 5.81$ ,  $p < .001$ ,  $d = 0.77$ , as were traders,  $t(257) = 9.06$ ,  $p < .001$ ,  $d = 1.20$ . Even sellers were seen as somewhat less likely to be non-beneficiaries when the *buyer's* motivation was given in Study 2,  $t(257) = 1.80$ ,  $p = .074$ ,  $d = 0.24$ , although this trend was modest given that sellers were near the floor. This latter result suggests that taking the perspective of the buyer may amplify the realization that sellers too benefit from exchange.

Thus, despite the similar patterns of results within Studies 1 and 2, the absolute rates of perceived non-benefit were far lower in Study 2, when an explanation was given for the transaction—even for explanations as minimal as that the buyer “wanted” the product.

This suggests that zero-sum thinking can be understood, in part, as a perspective-taking error—people do not spontaneously think of voluntary transactions as goal-directed. Thus, emphasizing that the buyer had a reason for the transaction—was making the purchase as a means of attaining some goal—is sufficient to lower perceived rates of non-benefit to less than half.

## General Discussion

Voluntary transactions benefit both parties—this is a truth universally acknowledged among economists. Here, we showed that people are far more pessimistic about gains from trade. When evaluating the relative welfare of buyers and sellers (in monetary exchanges) and of traders (in barterers), people frequently claimed that some parties to the transactions were worse off afterwards—in violation of elementary economics. Buyers were more likely to be seen as non-benefitting than sellers, purchases of goods were more likely to be seen as non-benefitting than purchases of services, and barterers were more likely to be seen as non-beneficial than monetary purchases. Almost all participants claimed that at least some of the parties did not benefit from one or more exchanges.

We also examined the mechanisms underlying this zero-sum mentality. Since zero-sum beliefs were especially acute for barterers, this undermines the idea that zero-sum thinking results from our minds' *evolutionary misadaptation* to barter rather than exchange economies.

However, we found evidence for two other mechanisms. First, buyers were consistently seen as less likely to benefit from exchange than sellers. This is consistent with *intuitive mercantilism*—the idea that a person's welfare is determined by their monetary wealth, not by their command of useful goods and services. Despite perennial attempts to conquer mercantilist thinking by economists (e.g., Bastiat, 2007/1845, Smith,

1999/1776), this sort of thinking may be so cognitively natural that it rises from the ashes each generation.

Second, zero-sum thinking seems to be driven largely by an error in *perspective-taking*. Merely reminding people that the buyers and traders have reasons for their choices reduced the incidence of zero-sum thinking by a factor of more than half (Study 2). These results suggest that people do not spontaneously reflect on the fact that parties to exchanges have reasons for their behavior, leading them to discount their potential gain.

**Folk economics.** Since the beginning of scientific economics, its practitioners have complained about the public's economic ignorance. Recent survey data comparing the views of economists and laypeople suggests that little progress has been made since the time of Adam Smith—even though the science of economics has advanced greatly, our intuitive theories seem to be stuck in time (Caplan, 2006).

We view the current studies as a step toward a systematic study of people's intuitive theories of economics (see also Boyer & Petersen, 2018; cf. Johnson, 2018). This endeavor has precedents in opinion polls of laypeople (e.g., Caplan, 2006), studies of opinions on issues such as unemployment and poverty (e.g., Lewis, Webley, & Furnham, 1995), and studies of lay decision theory (Johnson & Rips, 2015). Yet, psychology is only now seeking a systematic understanding of *folk economics*, in the same way that we have a sophisticated grasp of folk psychology (Apperly, 2010), physics (Carey, 2009), and statistics (Kahneman, 2011).

Although zero-sum thinking may be economists' favorite fallacy to pick on (e.g., Rubin, 2003; Sowell, 2008), it has good company. For instance, people may have a “physical fallacy” (Sowell, 1980)—the idea that goods have precisely one value at a given time, when of course goods have different values to different individuals. People may suffer from “counterfactual neglect”—a focus on the effects of a chosen policy, without considering what would have arisen in its absence. And people may be guilty of “bottom-up inversion”—the confusion of emergent market constraints with the intentions of individual market participants. Our ongoing work studies these misconceptions empirically.

**Implications for politics.** Democracy involves a trade-off—political leaders must be responsive to people's expressed interests, limiting the range of potential self-interested choices they can make. But the policies we get in place of dictatorship will not be effective if people do not in fact know what is in their interest (Caplan, 2006). Thus, if democracy is to be effective in maximizing everyone's well-being, it is critical that voters be informed not only about the narrow issues of the day, but perhaps more importantly about the fundamental principles governing the economy.

No one knows what our political leaders really think about trade. Perhaps they do not really believe that it is zero-sum. But they surely say so, and the current research

shows, regrettably, that they have good game-theoretic reasons for it: Zero-sum thinking is a pervasive element in human psychology. Politicians' ability to harness this populist sentiment is surely one source of their political power, with all the policy consequences that it entails.

We may not know how to solve public policy, but at least we now have a good idea about why many people oppose free trade and open immigration: Not only do trade and immigration harness in-group bias (see Caplan, 2006; Boyer & Petersen, 2018), but they also violate the logic of a zero-sum game—if Americans allow China and Mexico to get part of the pie, then the part left for Americans will be smaller. Perhaps the moderating factors uncovered here—interventions that emphasize the mental states and reasonableness of parties to transactions—can be harnessed to attenuate zero-sum thinking in the classroom and in the political arena.

**Implications for business.** Do consumers mope around the mall, feeling as though they are being constantly worsened by each transaction they undertake? Although this caricature seems unlikely, zero-sum thinking may lead consumers to adopt a resentful attitude toward sellers, at least some of the time. Indeed, we find in some of our ongoing research that consumers often feel they are made worse-off by their transactions—a kind of theory-driven buyers' remorse. Interventions that underscore the harmony between the interests of buyers and sellers may be effective in improving consumers' experience and lessening regret over past purchases.

Zero-sum thinking may be especially problematic when purchasing goods from abroad, because the transaction is a double-loss—not only may the consumer see himself or herself as failing to benefit, but the consumer's nation may also be seen as suffering a loss. Studying consumers' views of the benefits, or lack thereof, of purchasing foreign goods would contribute toward understanding bias against international transactions. Such an understanding would be helpful for improving the welfare of both consumers as well as foreign sellers.

Business books often invoke the language of “win-win” transactions. Now we understand why this concept requires so much emphasis. But we also understand how perspective-taking may play a vital role in successfully communicating the positivity of exchange, whether between consumer and seller, between manager and employee, or between parties to a negotiation. If your gain is my loss, then I had better minimize your gain. Of course, that perfectly ensures that no one is better off.

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