



PRICING PSYCHOLOGY

A GUIDE FOR MARKETERS AND MANAGERS

NICK KOLENDA

Hello...



I'm Nick Kolenda.

In 2015, I published a popular guide about pricing psychology. This eBook is an updated version of that guide.

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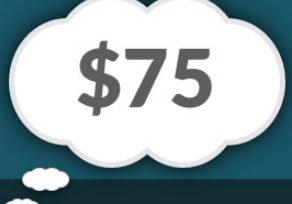
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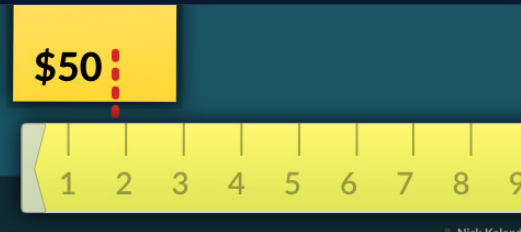
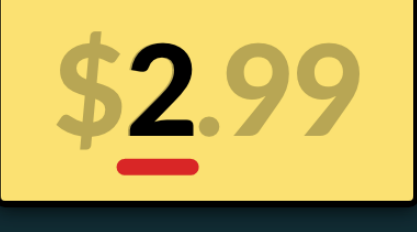
Contents

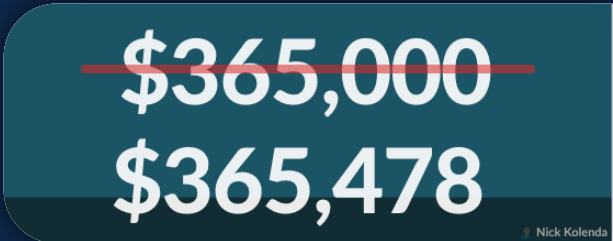
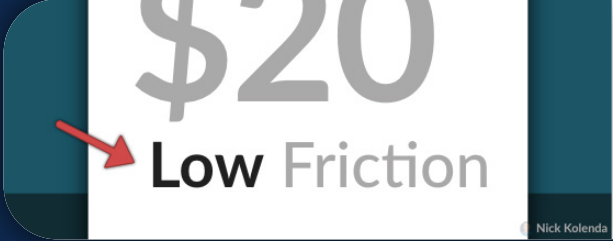
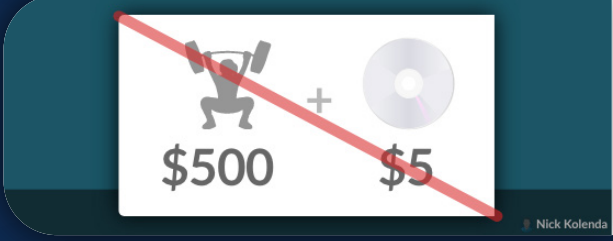
or use as checklist

THEORY

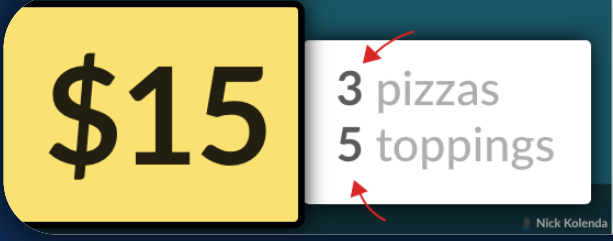
	Reference Prices	6
	Sensory Origin	8

SIZE PERCEPTION

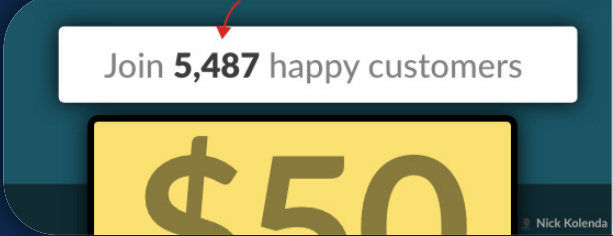
	Show Prices in Small Fonts	10
	Position Prices Near the Top or Left	11
	Choose Prices With Fewer Syllables	14
	Remove Commas From Prices	15
	Reduce the Left Digit By One	16
	Divide Prices into Smaller Units	17

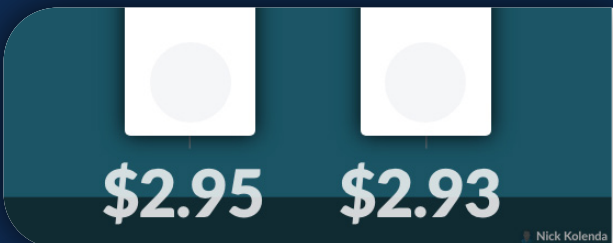
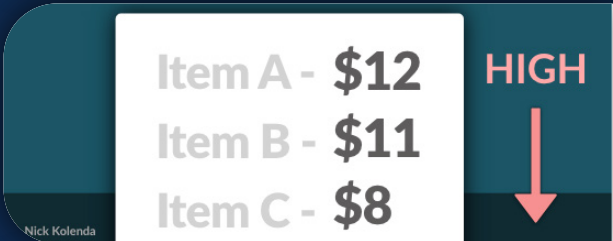
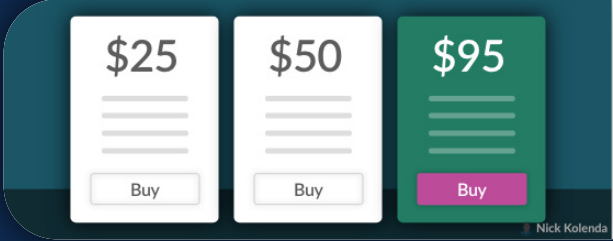
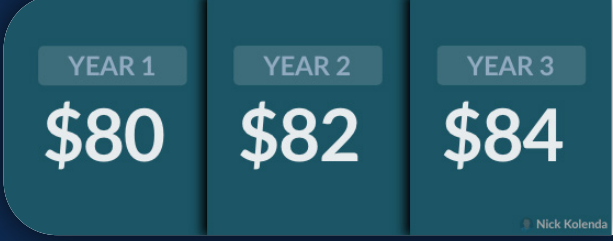
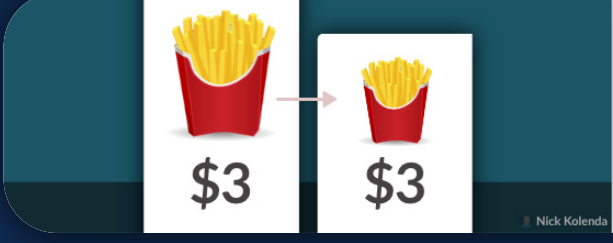
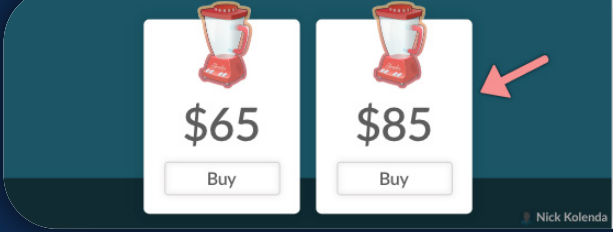
	Mention the Daily Equivalence	19
	Be Precise With Large Prices	20
	Group “Small” Elements with the Price	21
	Don’t Bundle Cheap and Expensive Items	22
	Place Low Numerals After Right-Facing Digits	23

FLUENCY

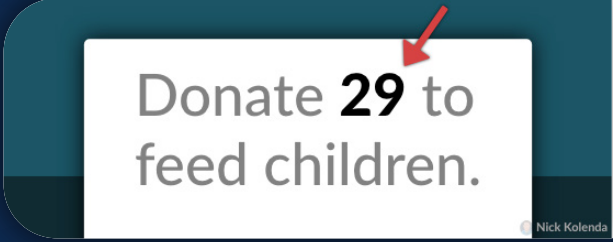
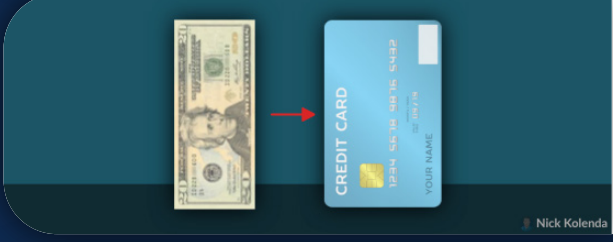
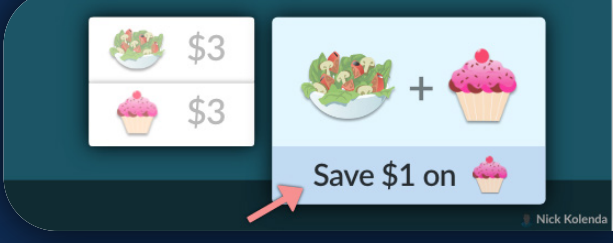
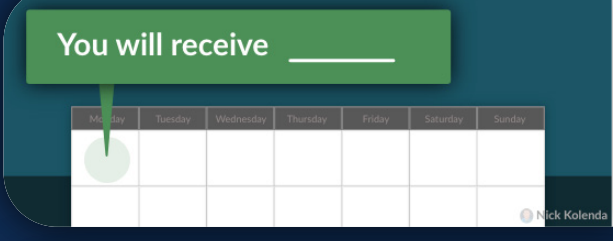
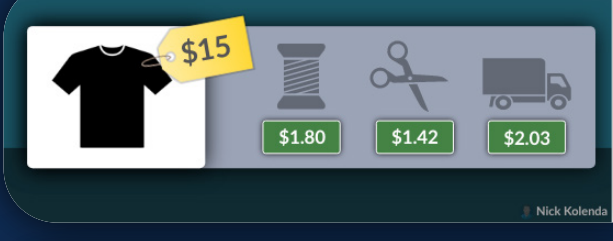
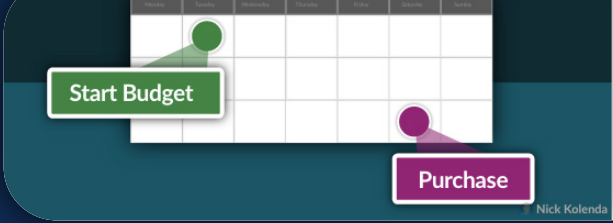
	Tailor Prices Toward Names or Birthdays	26
	Insert Alliteration into Prices	28
	Show Two Multiples of the Price Nearby	29
	Use Round Prices in the Right Context	32
	Display Red Prices to Men	34

REFERENCE PRICES

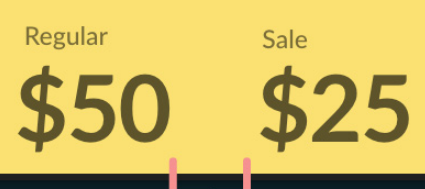
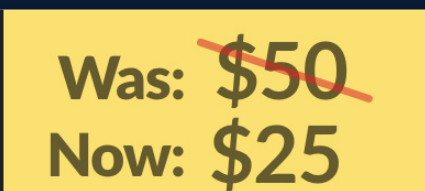
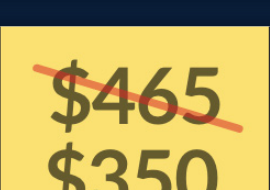
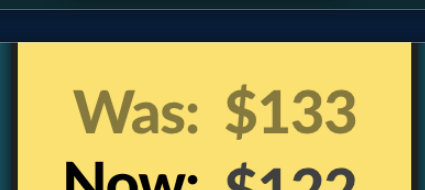
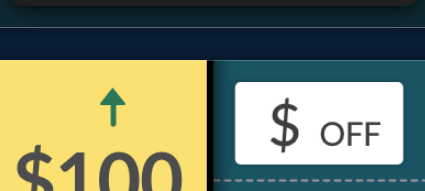
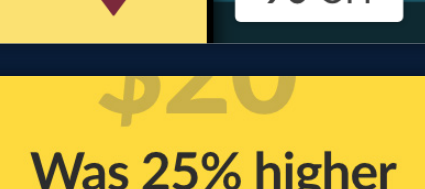
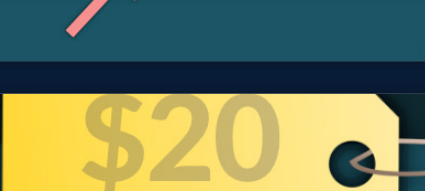
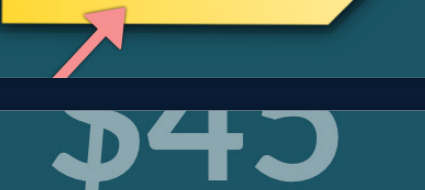
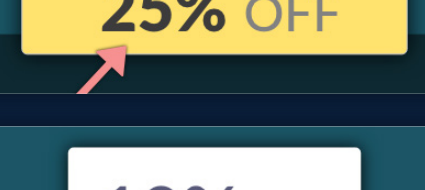
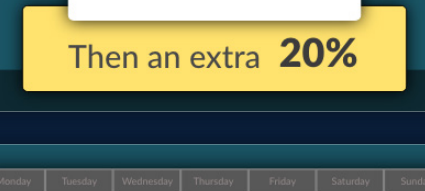
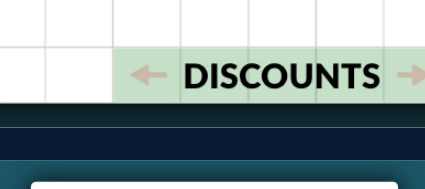
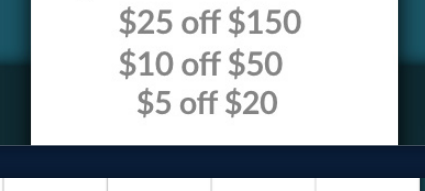
	Place a Larger Number on the Left	37
	Expose People to Any High Number	39

	Add Slight Price Differences in Your Assortment	41
	Show Higher Prices Before Lower Prices	43
	Distinguish the Most Expensive Option	46
	Raise Your Prices in Small Increments	47
	Downsize Features Besides Price	48
	Offer a Similar (Yet Expensive) Version	49

PAIN OF PAYING

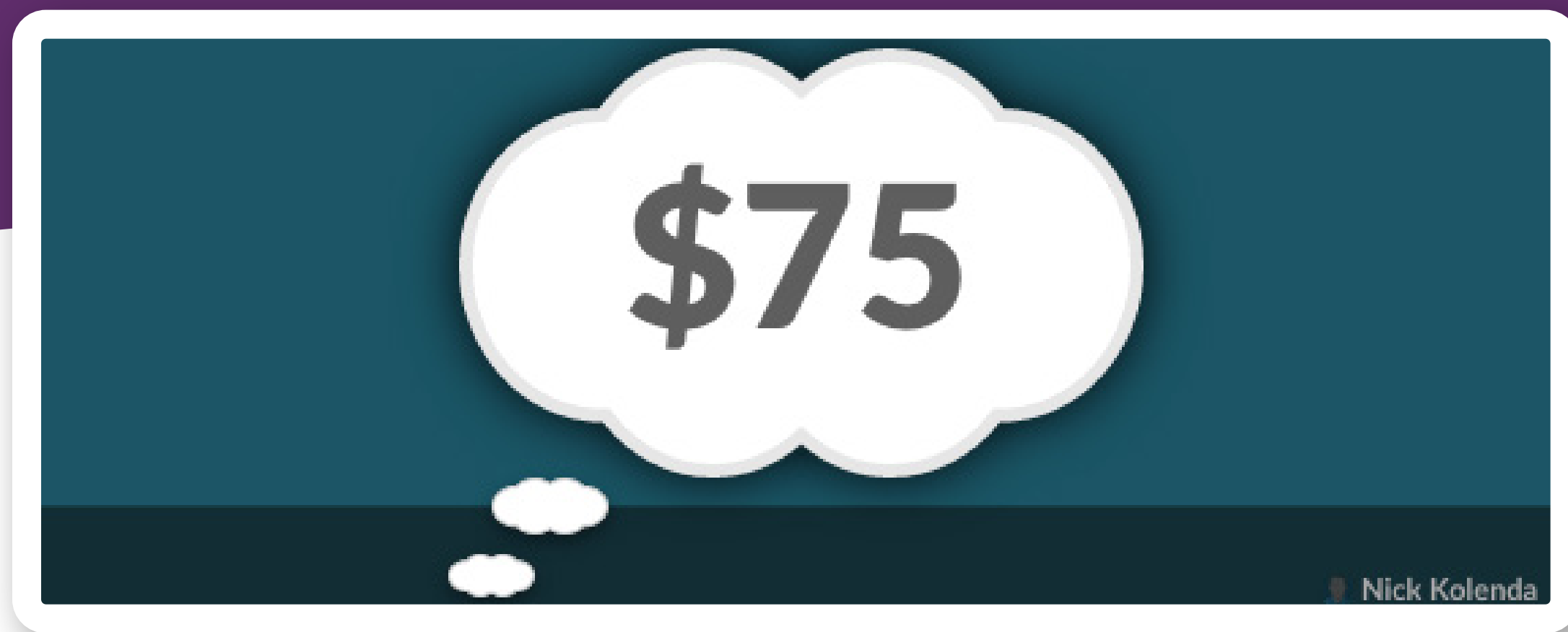
	Deemphasize the Prices of Emotional Products	52
	Remove the Currency Symbol When Possible	55
	Create a Payment Medium	56
	Attribute Discounts to Emotional Products	57
	Charge Customers Before They Consume	58
	Describe the Costs of Your Product	59
	Encourage Customers to Budget Early	60

DISCOUNTS

	Make Sale Prices Look Different From Original Prices	62
	Add Space Between Discounted Prices	64
	Place Sale Prices Below Original Prices	65
	Reduce Every Digit in the Discounted Price	66
	Offer Discounts With Low Right Digits	68
	Follow the Rule of 100	70
	Mention the Increase From the Discounted Price	71
	Provide a Reason for the Discount	72
	Offer Discounts in Round Numbers	73
	Give Two Discounts in Ascending Order	74
	Offer Discounts Toward the End of the Month	75
	Arrange Discounts in Tiered Amounts	76
	End Discounts Gradually	78
	Don't Discount Premium Products	79



THEORY



Reference Prices

You see a carton of eggs for \$3.

Is \$3 a good deal? How can you tell? What's happening in your brain?

Answer: Reference prices.

You compare \$3 to a “standard” price that you derive from:

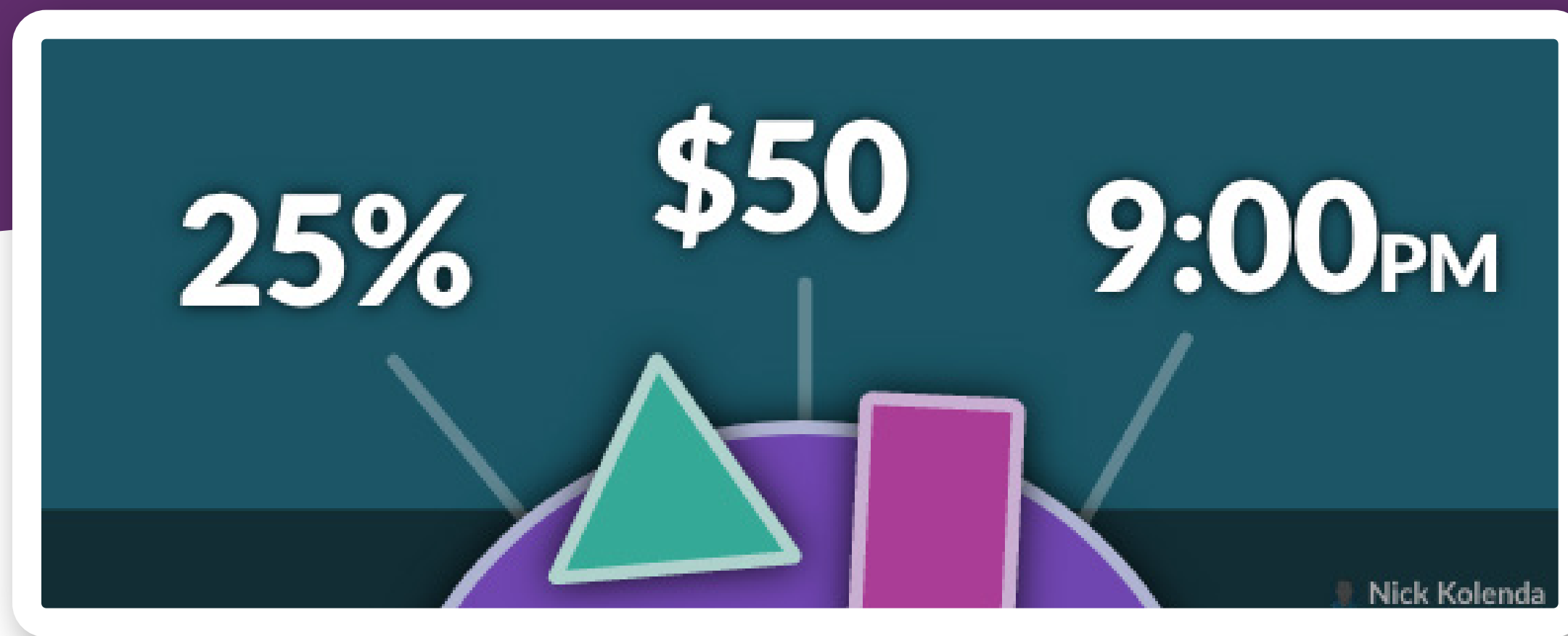
- **Previous Prices.** How much were eggs last time?
- **Advertised Prices.** What price were you promised?
- **Estimated Price.** What price were you expecting?
- **Adjacent Prices.** How much are competing eggs?
- **Nearby Numbers.** Any numbers in the vicinity?

You merge all of those sources into a single magnitude. Then you compare this “reference price” to the current product so that you can evaluate the price (see Briesch, Krishnamurthi, Mazumdar, & Raj, 1997; Mazumdar, Raj, & Sinha, 2005).

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Briesch, R. A., Krishnamurthi, L., Mazumdar, T., & Raj, S. P. (1997). A comparative analysis of reference price models. *Journal of Consumer Research*, 24(2), 202-214.

Mazumdar, T., Raj, S. P., & Sinha, I. (2005). Reference price research: Review and propositions. *Journal of marketing*, 69(4), 84-102.



Sensory Origin

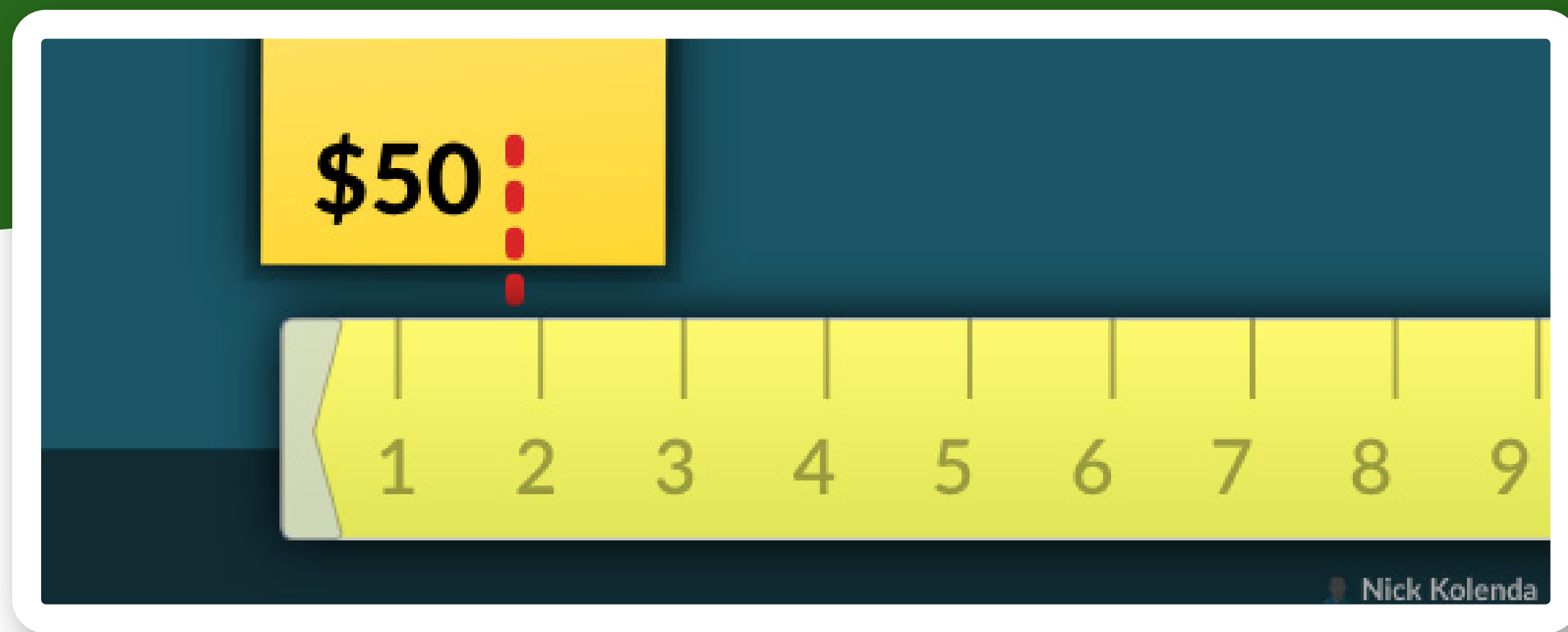
Numbers are abstract concepts.

In order to learn these concepts, you needed a sensory foundation. Today, in your brain, numbers are resting upon sensory concepts — and this structure influences your perception of prices.

This mechanism is complex, but you can refer to my video on [The Cognitive Origin of Numbers](#).



SIZE PERCEPTION



Show Prices in Small Fonts

Your brain confuses *visual* size for *numerical* size.

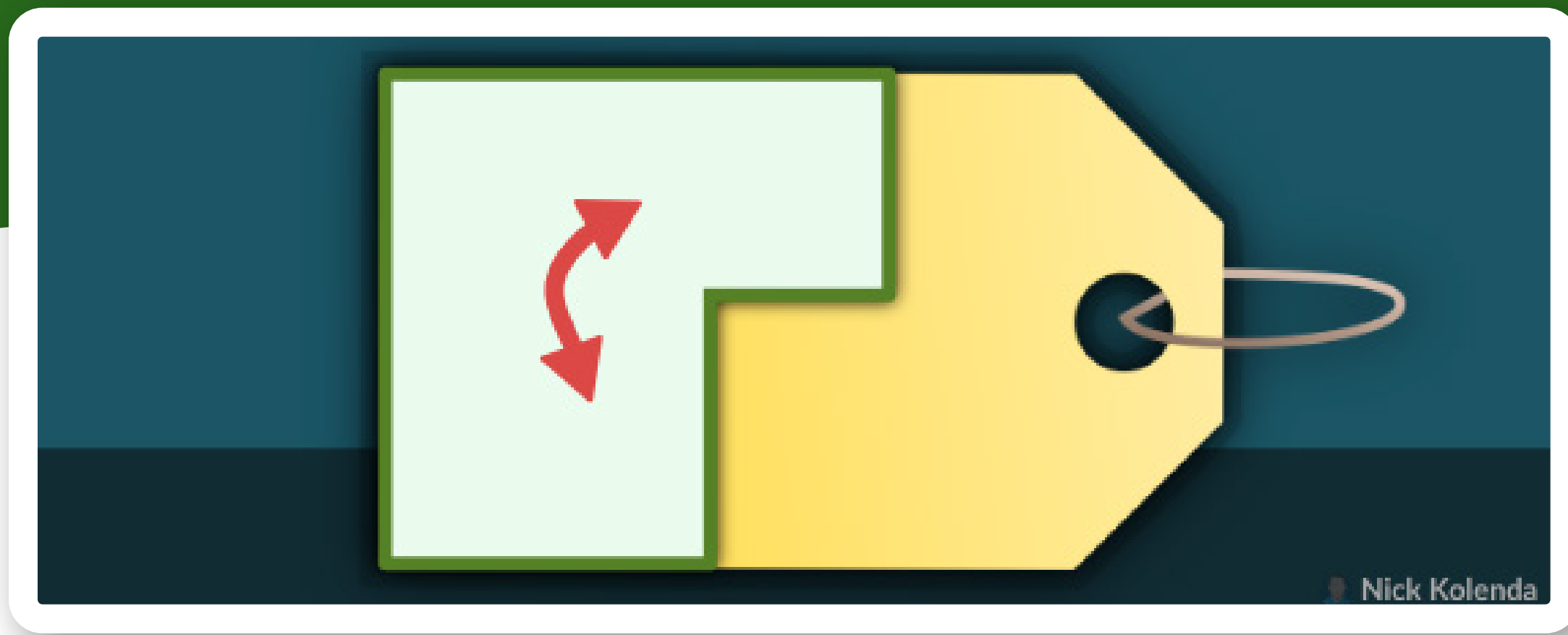
If you see \$50 in a large font, you think: *Hmm, how big is this price? Something feels big. The price must be high.*

Generally, you should display prices in a small font so that they seem numerically smaller (Coulter & Coulter, 2005).

Caveat: This tactic might only work with single products. Large fonts might work better for multiple products because customers judge the *difference* between those prices: *Hmm, how big is the price difference? Something feels big. The difference must be big.*

REFERENCES

Coulter, K. S., & Coulter, R. A. (2005). Size does matter: The effects of magnitude representation congruency on price perceptions and purchase likelihood. *Journal of Consumer Psychology*, 15(1), 64-76.



Position Prices Near the Top or Left

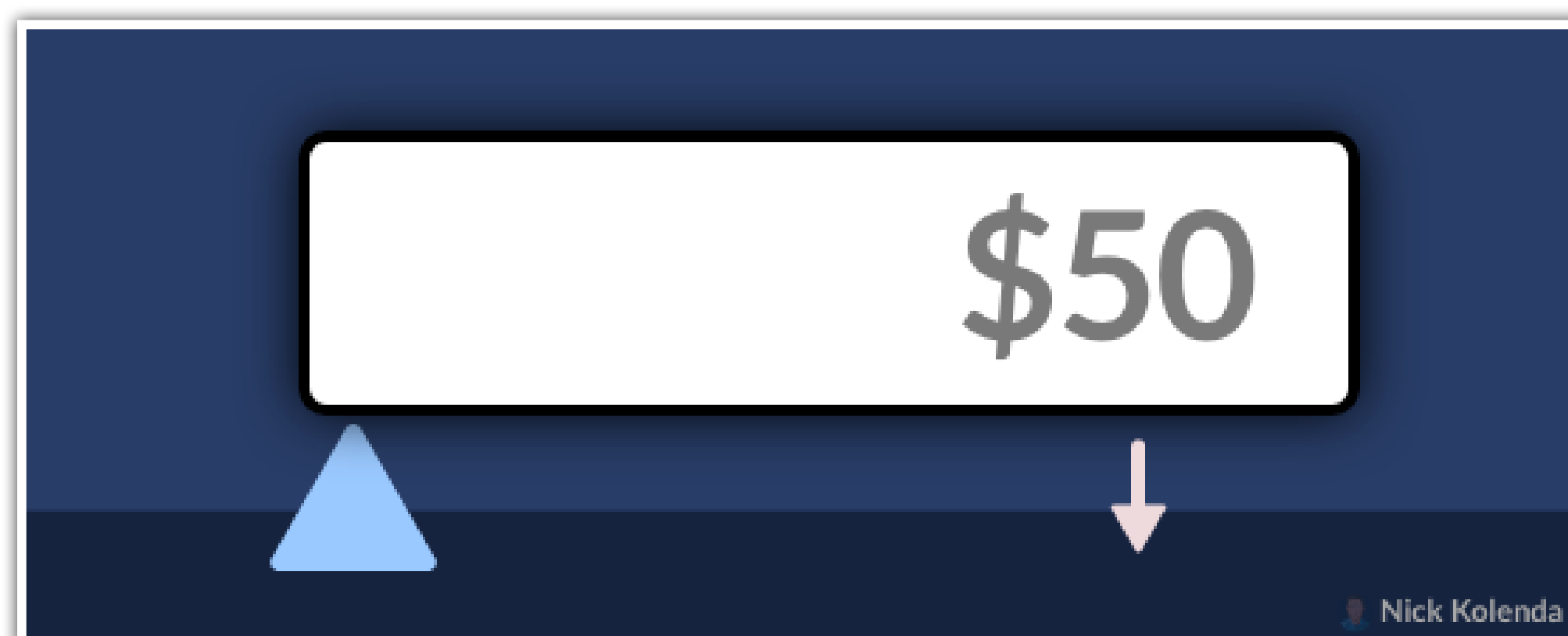
Prices seem cheaper in different locations, particularly on the top and left.

Why the Left?

Objects on the right pull downward:

...because our eyes enter a visual field from the left, the left naturally becomes the anchor point or 'visual fulcrum.' Thus, the further an object is placed away from the left side (or the fulcrum), the heavier the perceived weight (Deng & Kahn, 2009, p. 9).

Prices might feel heavy toward the right:



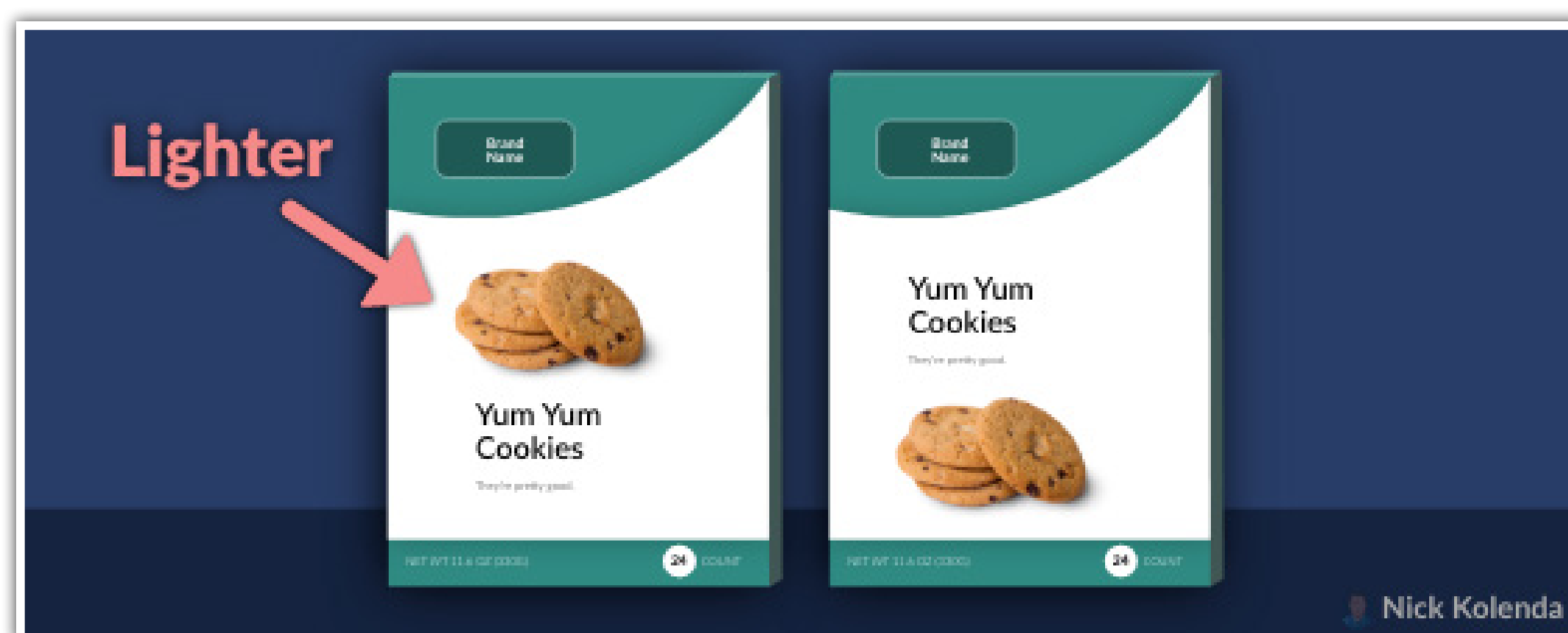
Plus, we conceptualize numbers on a horizontal ruler — they get larger from left to right (assuming that you read from left to right). Thus, small numbers are associated with the left:

...people typically see small numbers to the left of larger ones, [so] they are likely to associate small numerical values with locations on the left (Cai, Shen, & Hui, 2012, p. 723)

Caveat: One competing mechanism is *simulation fluency*. You prefer stimuli to be located on the same side as your dominant hand (Casasanto, 2009). Since most people are right-handed, I suspect that prices might “feel better” toward the right.

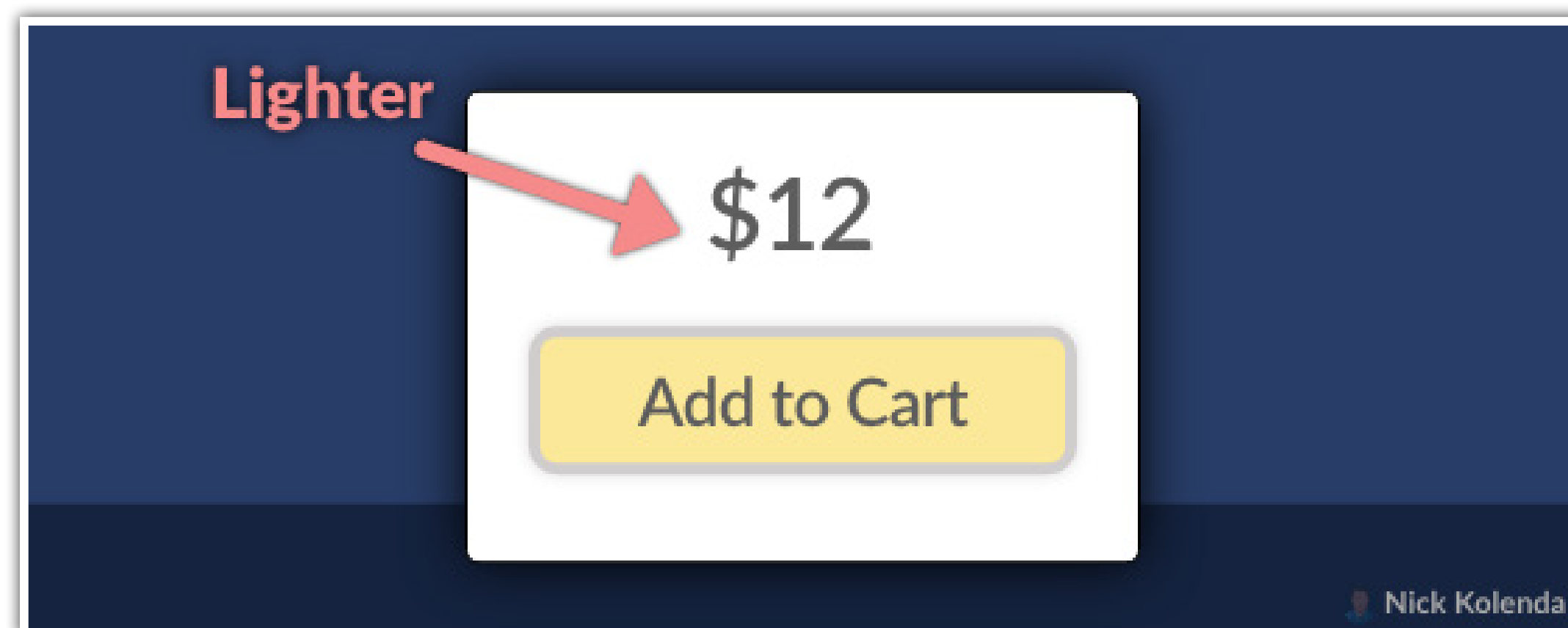
Why the Top?

In one study, cookies seemed lighter toward the top of a package (Deng & Kahn, 2009).



Why? Because the cookies seemed lifted to this location — so, naturally, they must be lighter.

Prices might inherit this effect.



One study confirmed that prices seem expensive in the bottom-right (Park & Ma, 2019). But we need more research – another study found that prices seemed cheaper at the bottom (Barone, Coulter, & Li, 2020).

REFERENCES

- Barone, M. J., Coulter, K. S., & Li, X. (2020). The Upside of Down: Presenting a Price in a Low or High Location Influences How Consumers Evaluate It. *Journal of Retailing*, 96(3), 397-410.
- Cai, F., Shen, H., & Hui, M. K. (2012). The effect of location on Price estimation: understanding number–location and number–order associations. *Journal of Marketing Research*, 49(5), 718-724.
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- Deng, X., & Kahn, B. E. (2009). Is your product on the right side? The “location effect” on perceived product heaviness and package evaluation. *Journal of Marketing Research*, 46(6), 725-738.
- Park, J., & Ma, Y. J. (2019). Number-location bias: do consumers correctly process the number on the product package?. *Journal of Product & Brand Management*.



Choose Prices With Fewer Syllables

Prices seem cheaper with fewer syllables (Coulter, Choi, and Monroe, 2012).

Consider two prices:

- **\$27.82:** Twenty-seven eighty-two (7 syllables)
- **\$28.16:** Twenty-eight sixteen (5 syllables)

Intriguingly, \$28.16 feels numerically smaller because of the smaller phonetic size. You don't need to say the price out loud — your brain encodes the phonetic version regardless (Dehaene, 1992).

REFERENCES

Coulter, K. S., Choi, P., & Monroe, K. B. (2012). Comma N'cents in pricing: The effects of auditory representation encoding on price magnitude perceptions. *Journal of Consumer Psychology*, 22(3), 395-407.

Dehaene, S. (1992). Varieties of numerical abilities. *Cognition*, 44(1-2), 1-42.



Remove Commas From Prices

Prices seem cheaper without commas (e.g., \$1499; Coulter, Choi, and Monroe, 2012).

Sure, the written length is shorter. But more importantly, the phonetic size is also shorter:

- **\$1,499:** One-thousand four-hundred and ninety-nine (10 syllables)
- **\$1499:** Fourteen ninety-nine (5 syllables)

REFERENCES

Coulter, K. S., Choi, P., & Monroe, K. B. (2012). Comma N'cents in pricing: The effects of auditory representation encoding on price magnitude perceptions. *Journal of Consumer Psychology*, 22(3), 395-407



Reduce the Left Digit By One

Why do marketers use “charm” prices, like \$2.99 or \$49.95? Why not \$3 or \$50?

Answer: The leftmost digit is smaller.

Your brain encodes prices before you finish reading the numerals. Therefore, a one-cent difference between \$2.99 and \$3.00 can feel like a one-dollar difference:

...while evaluating “2.99,” the magnitude encoding process starts as soon as our eyes encounter the digit “2.” Consequently, the encoded magnitude of \$2.99 gets anchored on the leftmost digit (i.e., \$2) and becomes significantly lower than the encoded magnitude of \$3.00 (Thomas & Morwitz, 2005, p. 55).

REFERENCES

Thomas, M., & Morwitz, V. (2005). Penny wise and pound foolish: the left-digit effect in price cognition. *Journal of Consumer Research*, 32(1), 54-64.



Divide Prices into Smaller Units

Reduce your “primary” price as much as possible. Perhaps you can divide this number into smaller units (e.g., fees).

These “partitioned prices” generally work better (Morwitz, Greenleaf, & Johnson, 1998).

Here are some examples.

1. Separate the Shipping Cost

Researchers tested bidding structures in online auctions:

- \$0.01 with \$3.99 shipping
- \$4 with free shipping

Auctions with separate shipping generated more revenue (Hossain & Morgan, 2006). Other research confirmed those results (Ward & Clark, 2002).

Caveat: Those studies might be outdated. Today, many customers expect free shipping.

2. Offer Prices in Installments

Instead of selling a course for \$1,250, sell the course for 12 payments of \$115. Customers will compare the installment price (\$115) to the reference price.

REFERENCES

Morwitz, V. G., Greenleaf, E. A., & Johnson, E. J. (1998). Divide and prosper: consumers' reactions to partitioned prices. *Journal of marketing research*, 35(4), 453-463.

Hossain, T., & Morgan, J. (2006). ... plus shipping and handling: Revenue (non) equivalence in field experiments on ebay. *Advances in Economic Analysis & Policy*, 5(2).

Ward, S. G., & Clark, J. M. (2002). Bidding behavior in on-line auctions: An examination of the eBay Pokemon card market. *International Journal of Electronic Commerce*, 6(4), 139-155.



Mention the Daily Equivalence

Frame your price in daily terms (e.g., \$1.60/day; Gourville, 1998). Or compare this daily price to a petty cash expense, such as a cup of coffee (Gourville, 1999).

Those strategies trigger an anchoring effect: Customers compare this daily value to the reference price, which seems like a better deal.

REFERENCES

Gourville, J. T. (1998). Pennies-a-day: The effect of temporal reframing on transaction evaluation. *Journal of Consumer Research*, 24(4), 395-408

Gourville, J. T. (1999). The effect of implicit versus explicit comparisons on temporal pricing claims. *Marketing Letters*, 10(2), 113-124.



Be Precise With Large Prices

Based on 27,000 real estate transactions, specific prices (e.g., \$362,978) are more effective than rounded prices (\$350,000; Thomas, Simon, & Kadiyali, 2007).

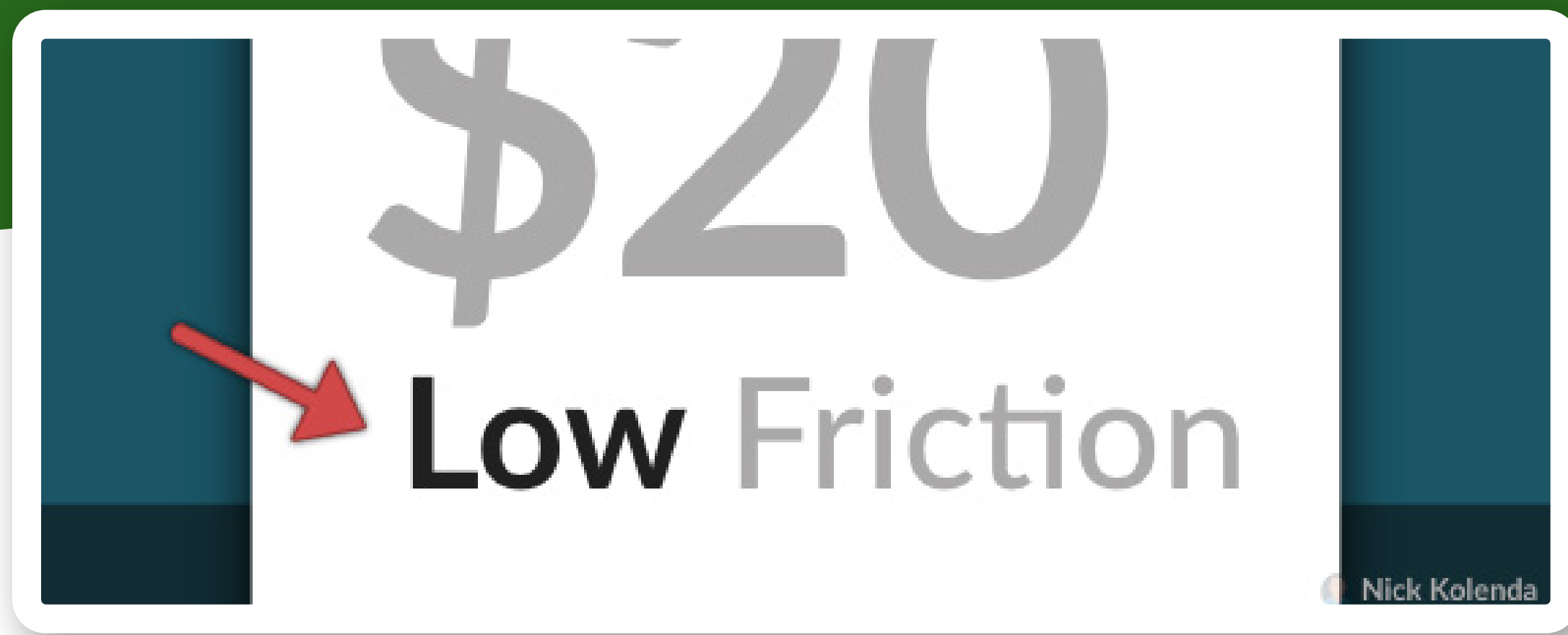
Why? Maybe buyers are less likely to negotiate?

That's what I thought — but nope. We just associate precise numbers with small values.

Think about it. You're more likely to use specific numbers when dealing with small numbers (e.g., 1, 2, 3). These prices just feel smaller.

REFERENCES

Thomas, M., Simon, D. H., & Kadiyali, V. (2007). Do consumers perceive precise prices to be lower than round prices? Evidence from laboratory and market data. Evidence from Laboratory and Market Data (September 2007). Johnson School at Cornell University Research Paper, (09-07).



Group “Small” Elements with the Price

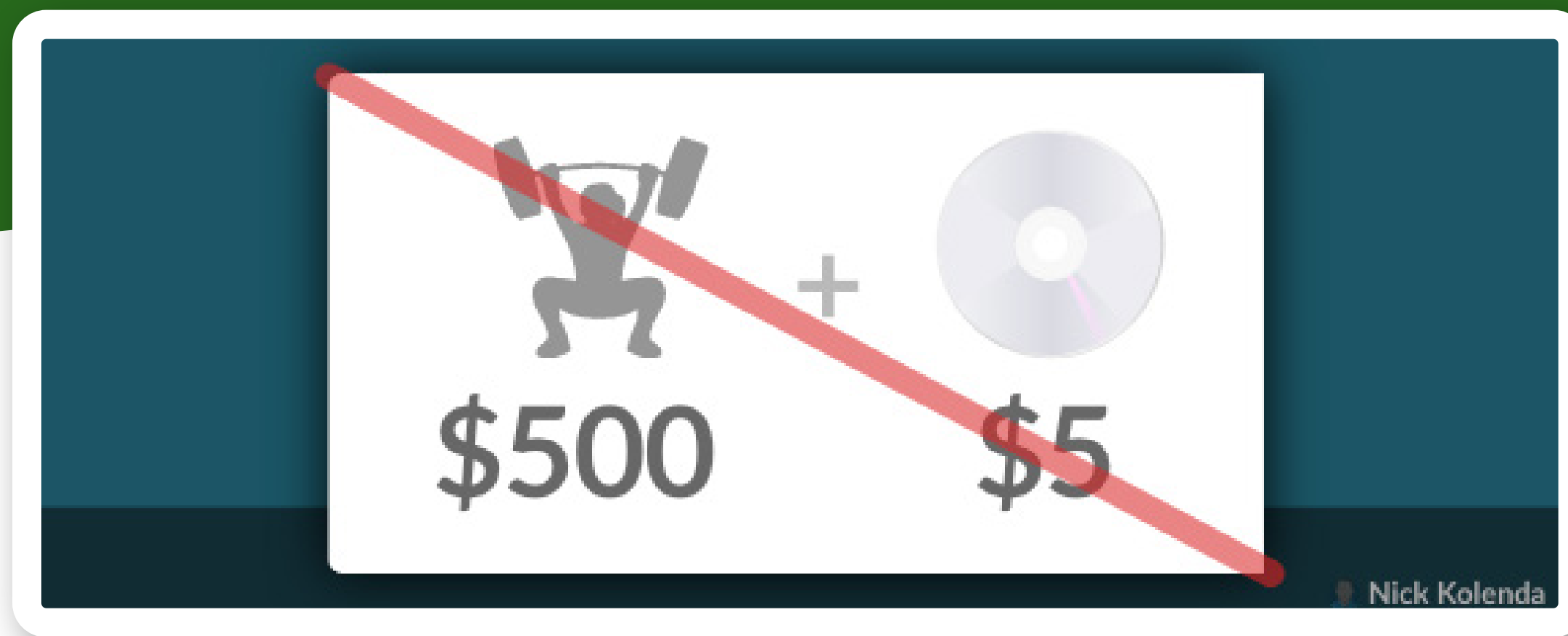
Be careful with any words near your price. Choose words that depict a small size (e.g., “low,” “small,” “tiny”).

In one study, an inline skate seemed cheaper when “Low Friction” appeared near the price. The price seemed higher with “High Performance” (Coulter & Coulter, 2005).

The reason is complex, but you can refer to Chapter 4 of my book [The Tangled Mind](#) to learn the details.

REFERENCES

Coulter, K. S., & Coulter, R. A. (2005). Size does matter: The effects of magnitude representation congruency on price perceptions and purchase likelihood. *Journal of Consumer Psychology*, 15(1), 64-76.



Don't Bundle Cheap and Expensive Items

Selling a \$500 home gym? Don't bundle it with a \$5 fitness DVD (Brough & Chernev, 2012).

Customers don't *sum* these values. They *average* them. Therefore, cheap items detract the value of expensive items.

REFERENCES

Brough, A. R., & Chernev, A. (2012). When opposites detract: Categorical reasoning and subtractive valuations of product combinations. *Journal of Consumer Research*, 39(2), 399-414.



Place Low Numerals After Right-Facing Digits

Human bodies guide attention.

You instinctively look in whichever direction a body is facing (Langton, Watt, & Bruce, 2000).

A similar effect happens with digits (Coulter, 2007). Digits can face particular directions:

- **Left:** 2, 3, 4, 7, 9
- **Center:** 1, 8, 0
- **Right:** 5, 6

...and these orientations guide attention.

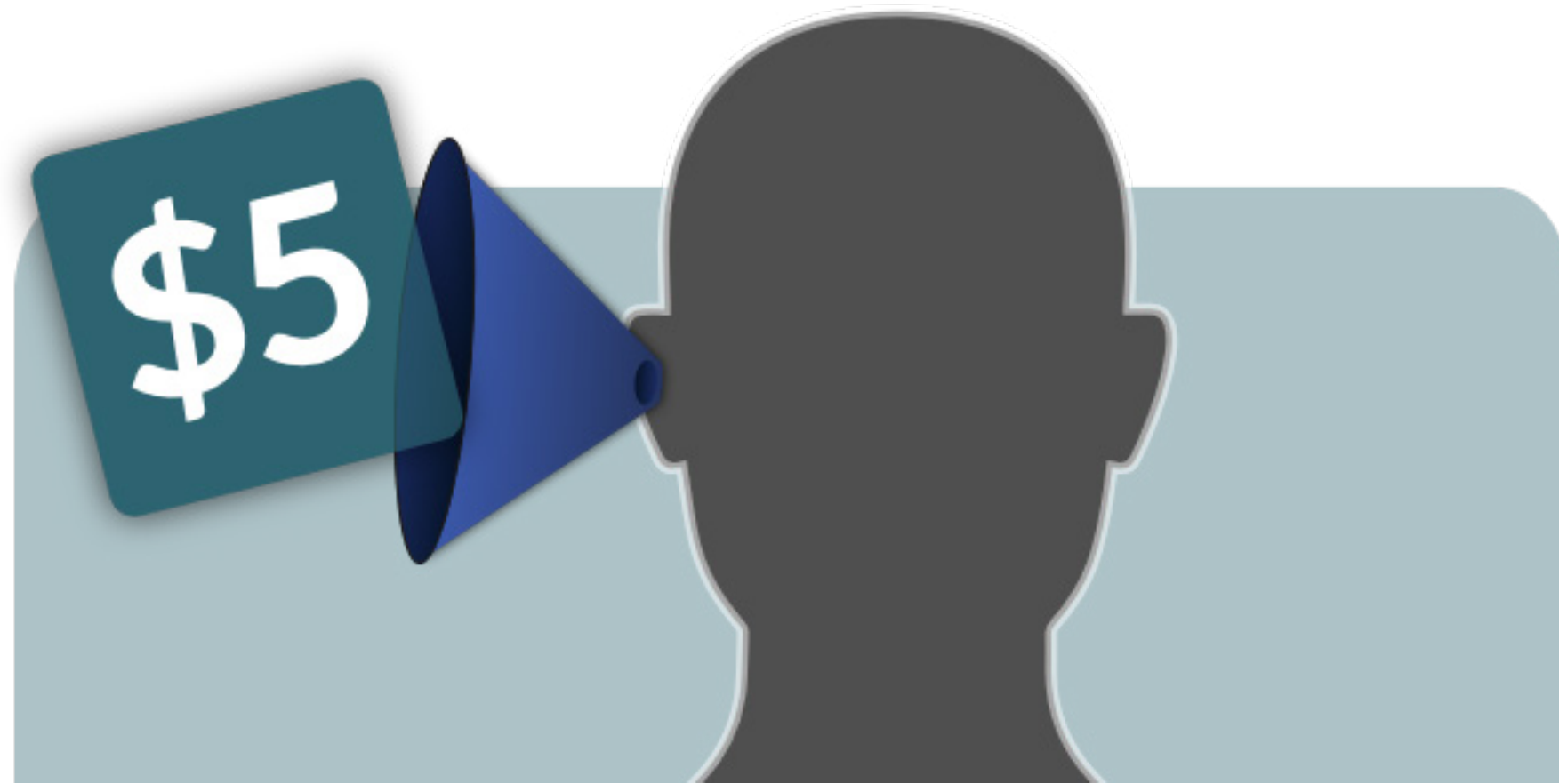
For example, rightward digits (e.g., 5, 6) push attention toward the right. In prices, these digits push attention toward the later digits – and customers are more likely to round up or down accordingly. Therefore, place small numerals after rightward digits so that customers round down to a lower price.

Conversely, leftward digits (e.g., 2, 3, 4, 7, 9) keep attention toward the left. In prices, these digits push attention away from the later digits. You can place large numerals at the ends of these prices because customers will ignore them.

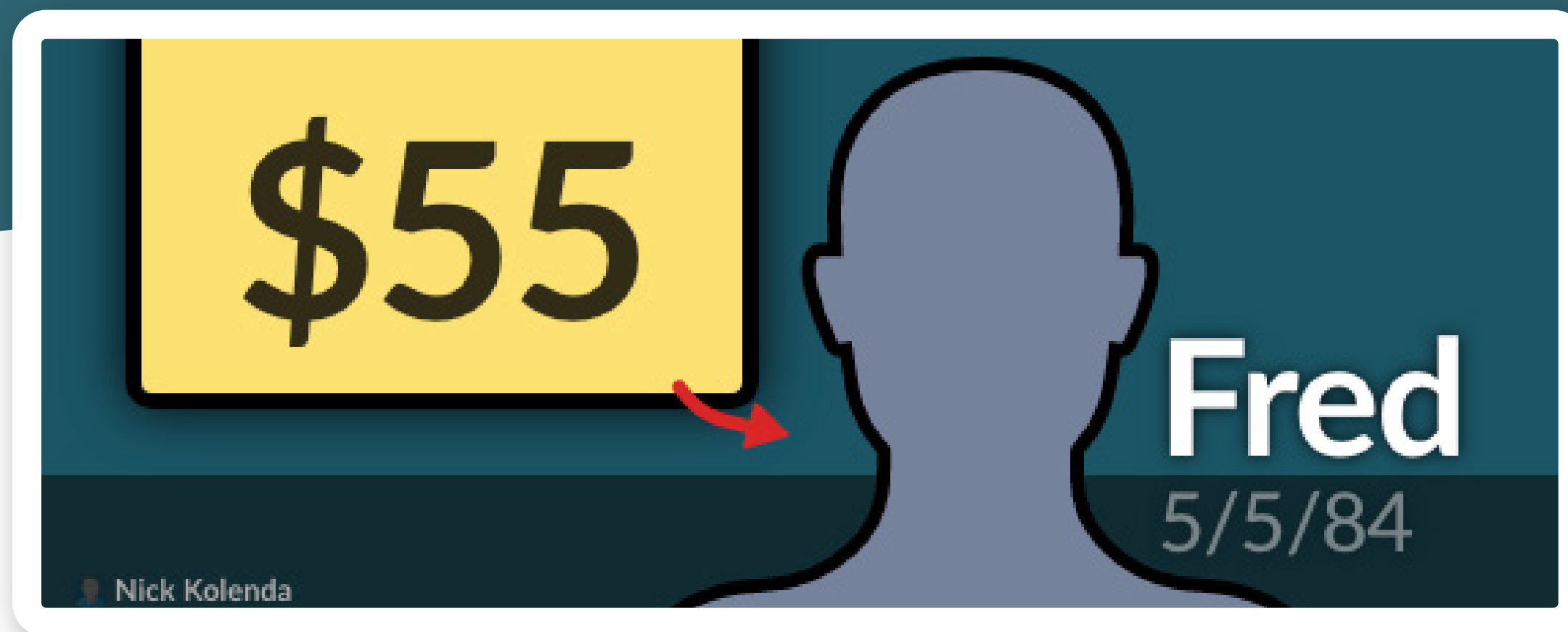
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Coulter, K. S. (2007). The effects of digit-direction on eye movement bias and price-rounding behavior. *Journal of Product & Brand Management*.

Langton, S. R., Watt, R. J., & Bruce, V. (2000). Do the eyes have it? Cues to the direction of social attention. *Trends in cognitive sciences*, 4(2), 50-59.



FLUENCY



Tailor Prices Toward Names or Birthdays

Customers prefer prices that contain the same letters in their name or birthday:

...consumers like prices (e.g., “fifty-five dollars”) that contain digits beginning with the same first letter (e.g., “F”) as their own name (e.g., “Fred,” “Mr. Frank”) more than prices that do not. Similarly, prices that contain cents digits (e.g., \$49.15) that correspond to a consumer’s date of birth (e.g., April 15) also enhance pricing liking and purchase intentions. (Coulter and Grewal, 2014, p. 102)

Based on *implicit egotism*, we prefer things that resemble us — including our name or birthday (Pelham, Carvallo, & Jones, 2005). Some researchers argue that this principle dictates our lives (e.g., people named Dennis are more likely to become dentists; Pelham, Mirenberg, & Jones, 2002).

Giving a quote? Perhaps you could adjust the numerals to match their name or birthday (after a quick glance at Facebook).

REFERENCES

Coulter, K. S., & Grewal, D. (2014). Name-letters and birthday-numbers: Implicit egotism effects in pricing. *Journal of Marketing*, 78(3), 102-120.

Pelham, B. W., Carvallo, M., & Jones, J. T. (2005). Implicit egotism. *Current Directions in Psychological Science*, 14(2), 106-110.

Pelham, B. W., Mirenberg, M. C., & Jones, J. T. (2002). Why Susie sells seashells by the seashore: implicit egotism and major life decisions. *Journal of personality and social psychology*, 82(4), 469.



Insert Alliteration into Prices

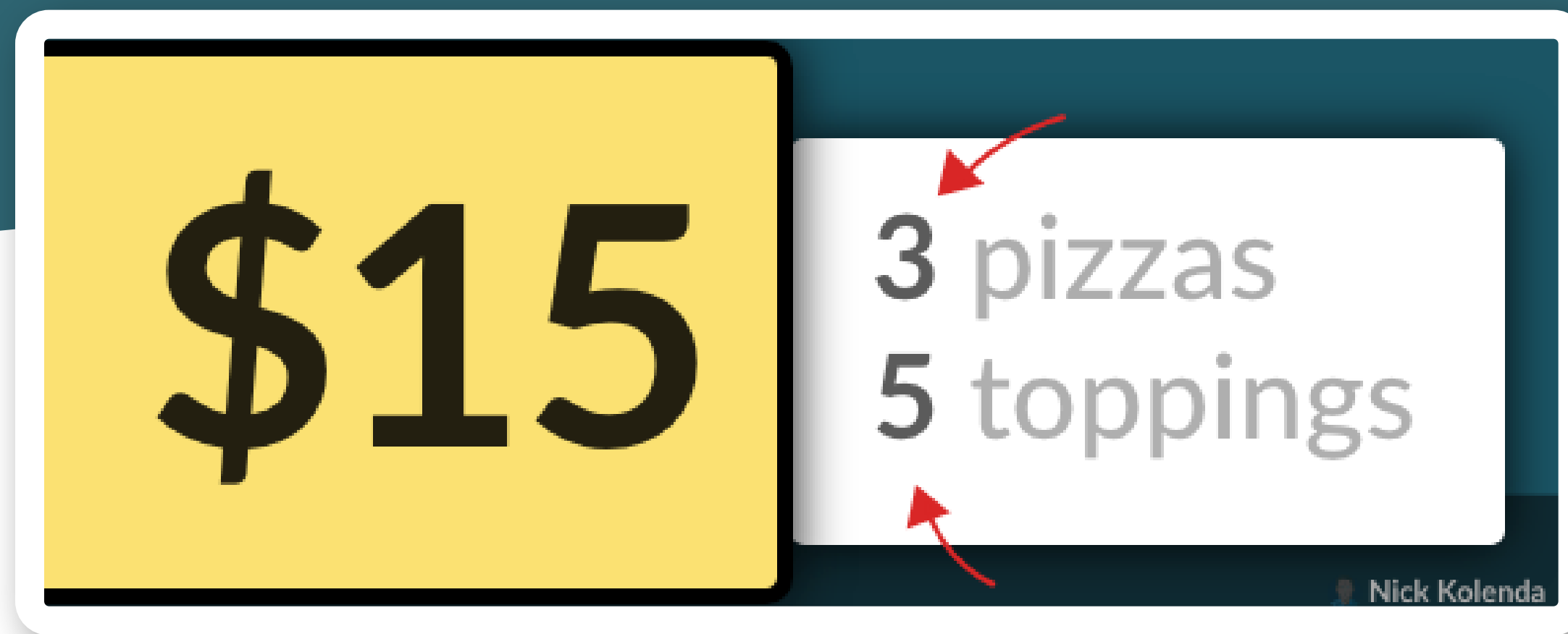
Alliteration feels good.

Something just “feels right” — and we misattribute this pleasant sensation to the context.

Research confirms that alliterative prices are effective: Customers were more likely to buy two t-shirts for \$25 because of the matching “t” sounds (Davis, Bagchi, & Block, 2016)

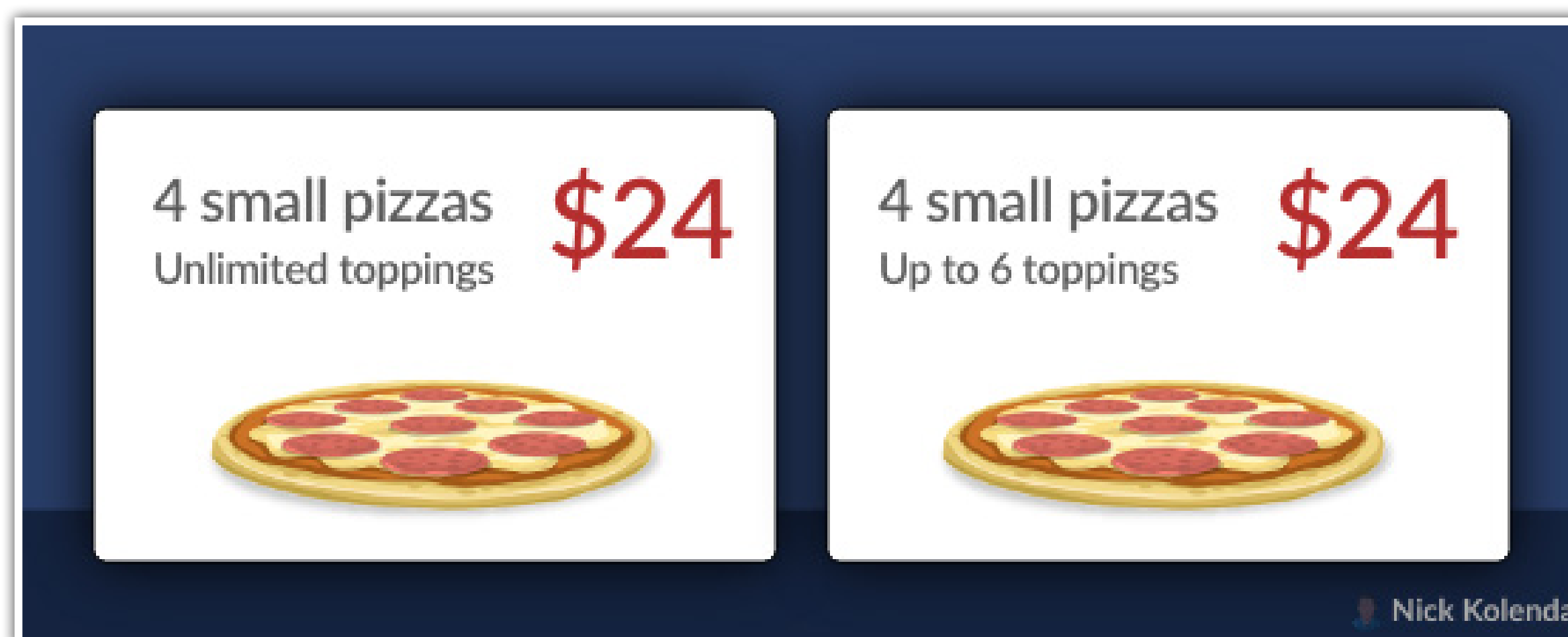
REFERENCES

Davis, D. F., Bagchi, R., & Block, L. G. (2016). Alliteration alters: Phonetic overlap in promotional messages influences evaluations and choice. *Journal of Retailing*, 92(1), 1-12.



Show Two Multiples of the Price Nearby

Compare these two pizza advertisements:



The left ad is economically superior because people have “unlimited” toppings. However, people were more likely to buy the second deal with “6” toppings (King & Janiszewski, 2011).

See the culprit?

It involves multiples of the price:



Your brain stores common arithmetic problems:

Over time, children are drilled on simple problems so that an association develops between operands (e.g., 2×6) and results (e.g., 12). These stored associations are called “number facts” (Baroody 1985).

Exposure to two numbers (e.g., 2 and 6) immediately activates the sum (e.g., 8) and product (e.g., 12).

In the pizza ads, the price of \$24 seemed better when the ad was showing two multiples (e.g., 6 and 4). Customers misattributed this sensation: *Hmm, something feels right. I must want to buy this deal.*

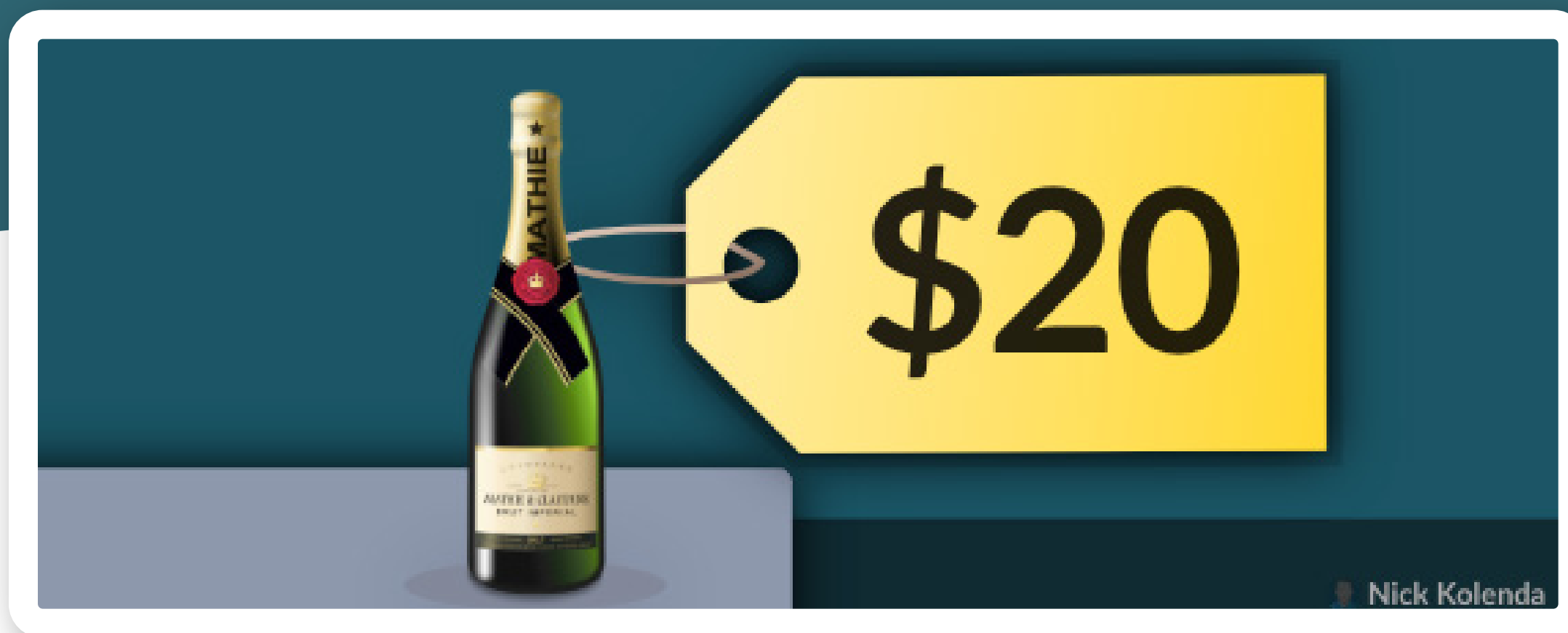
When possible, show two multiples of your price:

- **\$15:** 3-Day Sale for \$5 Off
- **\$120:** Get 4 Weekly 30-Minute Coaching Calls
- **\$500:** Get 5 Bonus PDFs for Free (\$100 Value)

Caveat: Show two — and *only* two — multiples. If your price is \$12, many multiples (e.g., 2, 3, 4, *and* 6) will weaken the activation of \$12.

REFERENCES

King, D., & Janiszewski, C. (2011). The sources and consequences of the fluent processing of numbers. *Journal of Marketing Research*, 48(2), 327-341.



Use Round Prices in the Right Context

Round prices (e.g., \$50) are easier to process than specific prices (e.g., \$49.63). Thus, round prices work better in these scenarios.

1. Emotional Purchases

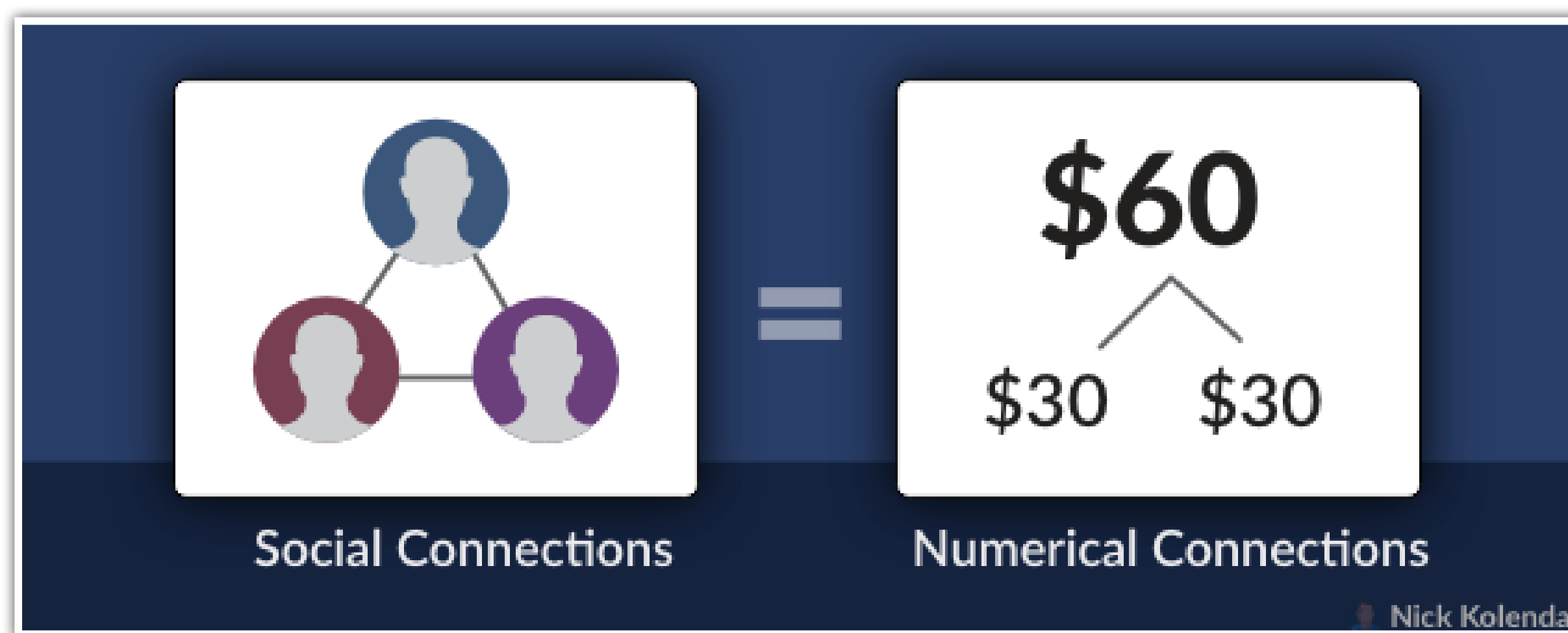
Round prices just “feel right” — a sensation that matches the nature of emotional products. Customers preferred champagne with a round price (\$40), yet preferred a calculator with a sharp price (\$39.72 and \$40.29; Wadhwa and Zhang, 2015).

2. Convenience Purchases

Round prices trigger an “easy” sensation, and customers misattribute this feeling to the transaction — the purchase seems faster and easier (Wieseke, Kolberg, & Schons, 2016). Therefore, use round prices when customers prefer a fast checkout.

3. Social Benefits

Round prices are divisible by other numbers, and customers misattribute this connectivity. Customers prefer round prices for social products (e.g., conference tickets) because they confuse the numerical connectivity for social connectivity (Yan & Sengupta, 2021).



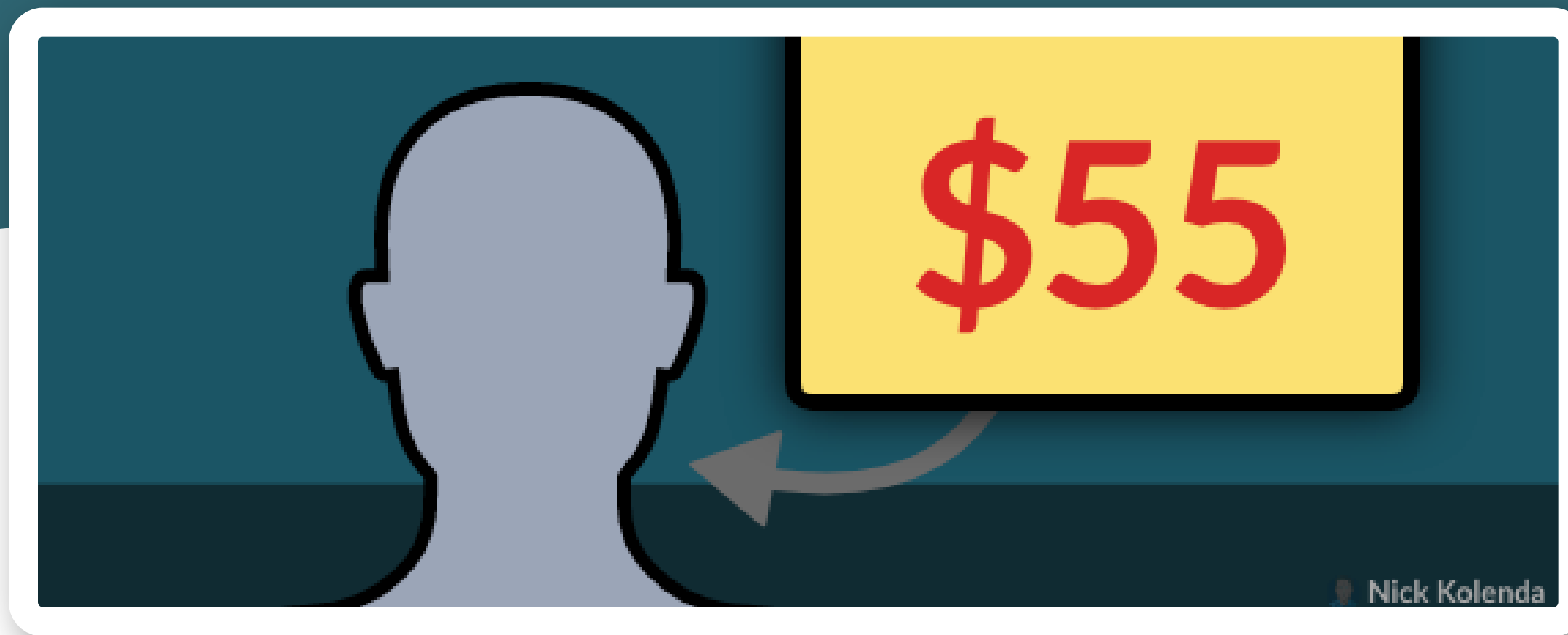
REFERENCES

Wadhwa, M., & Zhang, K. (2015). This number just feels right: The impact of roundedness of price numbers on product evaluations. *Journal of Consumer Research*, 41(5), 1172-1185.

Janiszewski, C., & Uy, D. (2008). Precision of the anchor influences the amount of adjustment. *Psychological Science*, 19(2), 121-127.

Wieseke, J., Kolberg, A., & Schons, L. M. (2016). Life could be so easy: The convenience effect of round price endings. *Journal of the Academy of Marketing Science*, 44(4), 474-494.

Yan, D., & Sengupta, J. (2021). The Effects of Numerical Divisibility on Loneliness Perceptions and Consumer Preferences. *Journal of Consumer Research*, 47(5), 755-771.



Display Red Prices to Men

Men prefer prices in red fonts:

Men seem to process the ads less in-depth and use price color as a visual heuristic to judge perceived savings (Puccinelli et al., 2013, p. 121).

Men make decisions quickly, and they assume that red prices indicate savings (see Van Droogenbroeck, Van Hove, & Cordemans, 2018 for a replication).

Caveat: All prices need to be red. Changing the color of one price could backfire (Ye, Bhatt, Jeong, & Zhang, 2020).

REFERENCES

Puccinelli, N. M., Chandrashekar, R., Grewal, D., & Suri, R. (2013). Are men seduced by red? The effect of red versus black prices on price perceptions. *Journal of Retailing*, 89(2), 115-125.

Van Droogenbroeck, E., Van Hove, L., & Cordemans, S. (2018). Do red prices also work online?: An extension of Puccinelli et al.(2013). *Color Research & Application*, 43(1), 110-113.

Ye, H., Bhatt, S., Jeong, H., Zhang, J., & Suri, R. (2020). Red price? Red flag! Eye-tracking reveals how one red price can hurt a retailer. *Psychology & Marketing*, 37(7), 928-941.



**REFERENCE
PRICES**



Place a Larger Number on the Left

Displaying a sale price?

Place the original price (the larger number) on the left. It's called the *subtraction principle*: Customers can subtract these numbers more easily, which makes the difference seem larger (Biswas et al., 2013).

Follow this technique for quantities, too. Which order is better:

- \$29 for 70 items
- 70 items for \$29

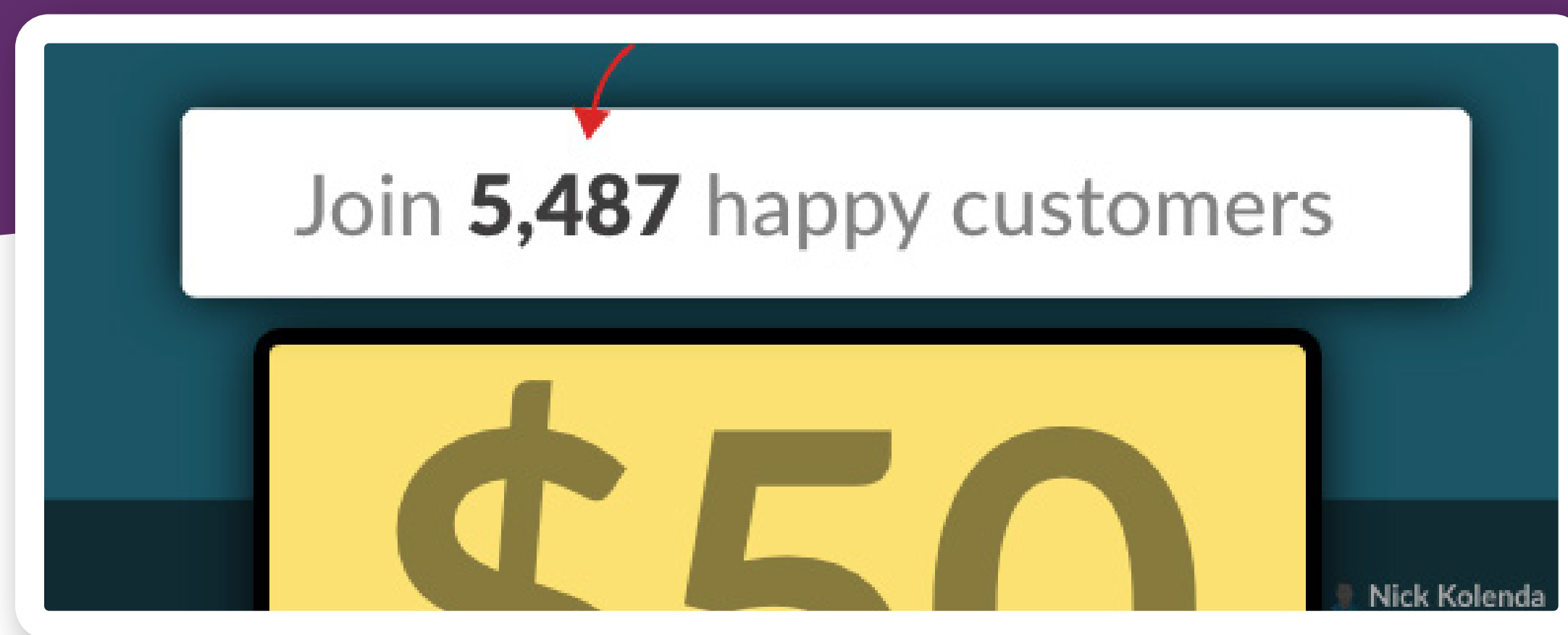
Answer: The second sequence (Bagchi & Davis, 2012).

Even though price and quantity are different concepts, the large quantity (e.g., 70) makes the price seem cheaper.

REFERENCES

Bagchi, R., & Davis, D. F. (2012). 29 for 70 items or 70 items for 29? How presentation order affects package perceptions. *Journal of Consumer Research*, 39(1), 62-73.

Biswas, A., Bhowmick, S., Guha, A., & Grewal, D. (2013). Consumer evaluations of sale prices: role of the subtraction principle. *Journal of Marketing*, 77(4), 49-66.



Expose People to Any High Number

Nearby numbers influence the reference price.

In one study, researchers sold music CDs on a boardwalk in West Palm Beach. Every 30 minutes, an adjacent vendor switched the price of a sweatshirt between \$10 or \$80.

Turns out, the \$80 sweatshirt boosted sales of CDs because they seemed cheaper (Nunes & Boatwright, 2004).

But surprisingly, this anchoring effect works with *any* number. In another study, people reflected on the last two digits of their social security number. If those digits were high, they were willing to pay a higher amount for products:

SS NUMBER	WILLING TO PAY
00 - 19	\$16.09
20 - 39	\$26.82
40 - 59	\$29.27
60 - 79	\$34.55
80 - 99	\$55.64

Ariely, D., Loewenstein, G., & Prelec, D. (2003). "Coherent arbitrariness": Stable demand curves without stable preferences. *The Quarterly journal of economics*, 118(1), 73-106.

Nick Kolenda

This anchoring effect occurs subconsciously — it even happened when researchers subliminally exposed people to a high number (Adaval & Monroe, 2002).

Therefore, show high numbers near your price:

- Join 5,487 happy customers
- Invoice #8986
- We donated \$100,000 to charity

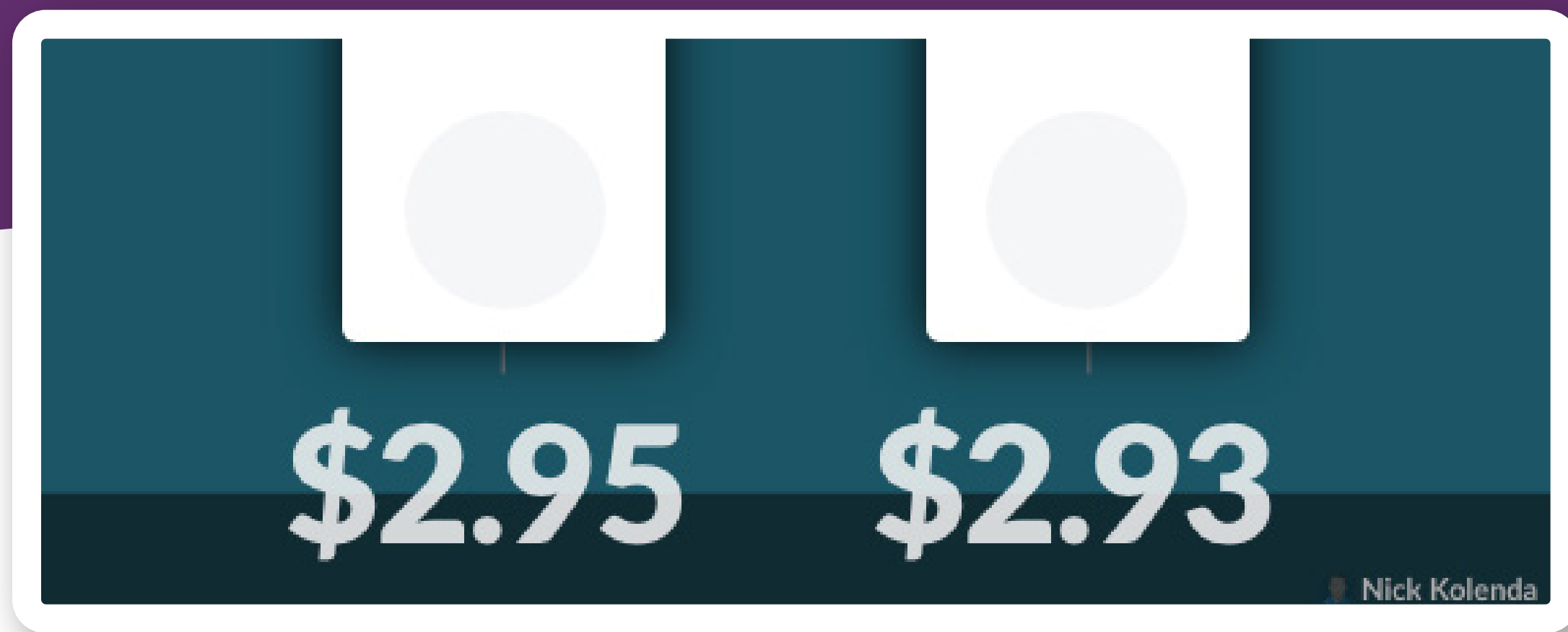
Those large numbers raise the reference price, which makes your actual price seem cheaper.

REFERENCES

Adaval, R., & Monroe, K. B. (2002). Automatic construction and use of contextual information for product and price evaluations. *Journal of Consumer Research*, 28(4), 572-588.

Ariely, D., Loewenstein, G., & Prelec, D. (2003). “Coherent arbitrariness”: Stable demand curves without stable preferences. *The Quarterly journal of economics*, 118(1), 73-106.

Nunes, J. C., & Boatwright, P. (2004). Incidental prices and their effect on willingness to pay. *Journal of Marketing Research*, 41(4), 457-466.



Add Slight Price Differences in Your Assortment

You prefer assortments with similar options (Sagi & Friedland, 2007).

In this scenario, you receive the same benefits from every option — so you don't lose any benefits by choosing an option.

In one study, researchers asked two groups if they wanted to buy gum. Each group had two options:

A: Same price (e.g., 63 cents)

B: Different price (62 cents vs. 64 cents)

Turns out, the different prices boosted purchases (Kim, Novemsky, & Dhar, 2012).

But why? Shouldn't similar prices perform better?

Surprisingly, no.

Paradoxically, the packs seemed *less* similar with the same price. In this scenario, customers struggled to distinguish these packs so they searched *harder* for differences.

However, slightly different prices can reduce this urge. Customers remained focused on similarities, so they are more likely to choose an option because they won't lose benefits by choosing an option.

REFERENCES

Kim, J., Novemsky, N., & Dhar, R. (2013). Adding small differences can increase similarity and choice. *Psychological science*, 24(2), 225-229.

Sagi, A., & Friedland, N. (2007). The cost of richness: The effect of the size and diversity of decision sets on post-decision regret. *Journal of personality and social psychology*, 93(4), 515.

Item A - \$12
Item B - \$11
Item C - \$8

HIGH

Nick Kolenda

Show Higher Prices Before Lower Prices

Customers are more likely to choose an expensive option when you sort prices from high to low.

Over an 8-week span, researchers alternated beer prices on a menu. They maximized revenue when prices were sorted from highest to lowest (Suk, Lee, & Lichtenstein, 2012).

LOW → HIGH		HIGH → LOW	
BEER 1	\$4	BEER 1	\$10
BEER 2	\$4	BEER 2	\$9
BEER 3	\$4	BEER 3	\$8
BEER 4	\$5	BEER 4	\$8
BEER 5	\$6	BEER 5	\$7
BEER 6	\$7	BEER 6	\$7
BEER 7	\$7	BEER 7	\$7
BEER 8	\$7	BEER 8	\$7
BEER 9	\$7	BEER 9	\$6
BEER 10	\$8	BEER 10	\$5
BEER 11	\$8	BEER 11	\$4
BEER 12	\$9	BEER 12	\$4
BEER 13	\$10	BEER 13	\$4
AVG SALE \$5.78		AVG SALE \$6.02	

Suk, K., Lee, J., & Lichtenstein, D. R. (2012). The influence of price presentation order on consumer choice. Journal of Marketing Research, 49(5), 708-717.

Nick Kolenda

Two reasons.

First, initial prices establish a reference price. Higher initial prices?
Higher reference prices:

Scenario	Initial Price	BEER 1	BEER 2	BEER 3	BEER 4	BEER 5
LOW → HIGH	\$4	\$4	\$4	\$4	\$5	\$6
HIGH → LOW	\$9	\$10	\$9	\$8	\$8	\$7

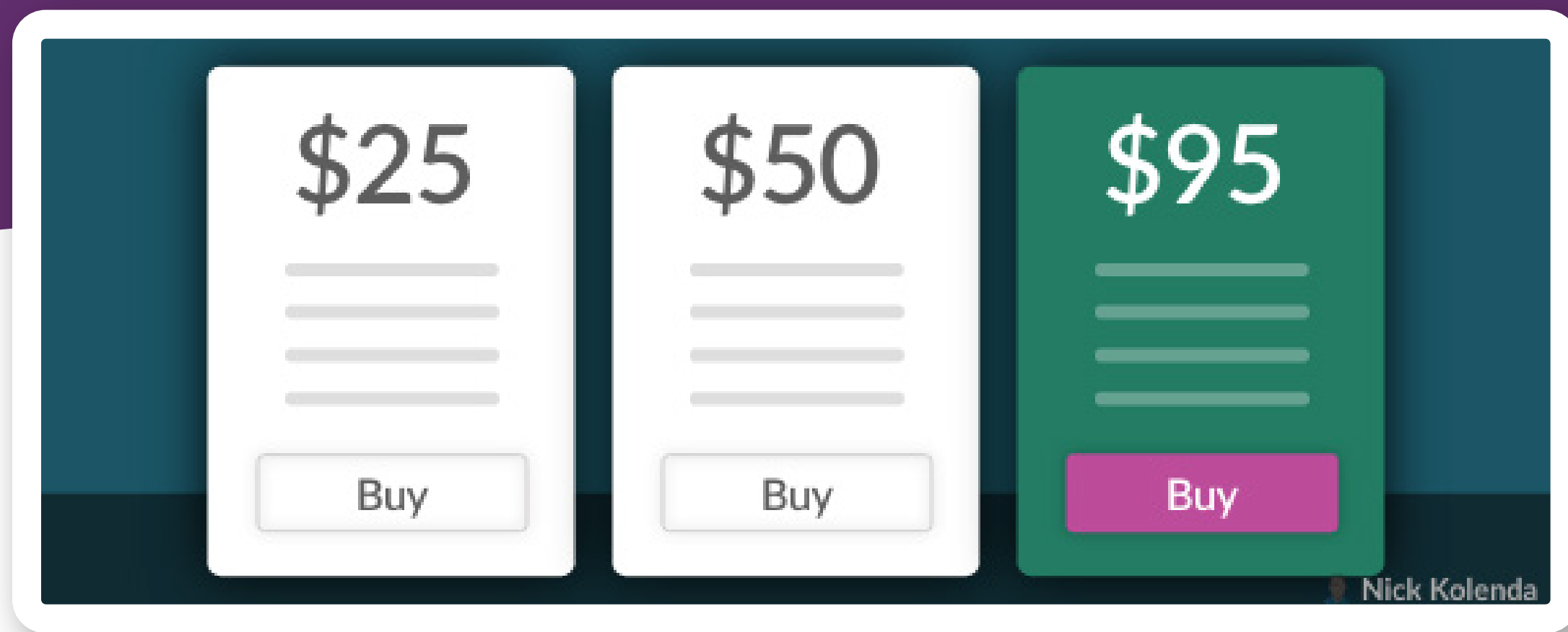
Customers use these initial prices to evaluate subsequent prices.

Second, there's loss aversion. While scanning products that get higher in price, customers lose the ability to pay a lower price. They feel pressured to pounce on a cheaper item before they get too expensive.

Showing prices in a *decreasing* sequence can trigger the reverse effect. Each new product feels like a loss in quality. Customers feel pressured to pounce on an option before they lose too much quality.

REFERENCES

Suk, K., Lee, J., & Lichtenstein, D. R. (2012). The influence of price presentation order on consumer choice. *Journal of Marketing Research*, 49(5), 708-717.



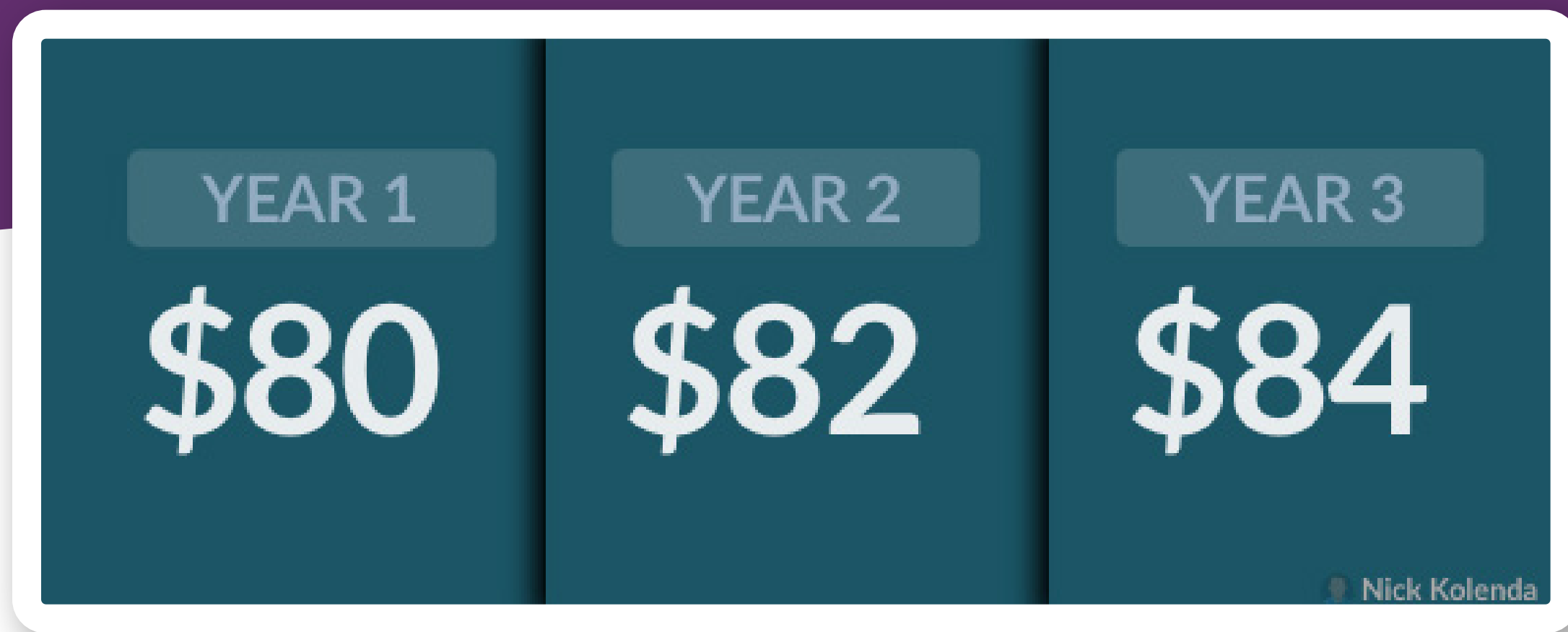
Distinguish the Most Expensive Option

I just argued that you should sort prices from high to low.

But it's not necessary. The real effect stems from the order in which prices are evaluated.

You could achieve the same effect by adding a visual distinction to the most expensive option. That way, customers evaluate this product first (and it inflates their reference price).

Use this trick when you need to keep prices in ascending order.



Raise Your Prices in Small Increments

Adjust prices based on the *just noticeable difference* (i.e., the difference that's *just noticeable*)

If your price is \$11, an increase to \$20 will be more noticeable than an increase to \$12.

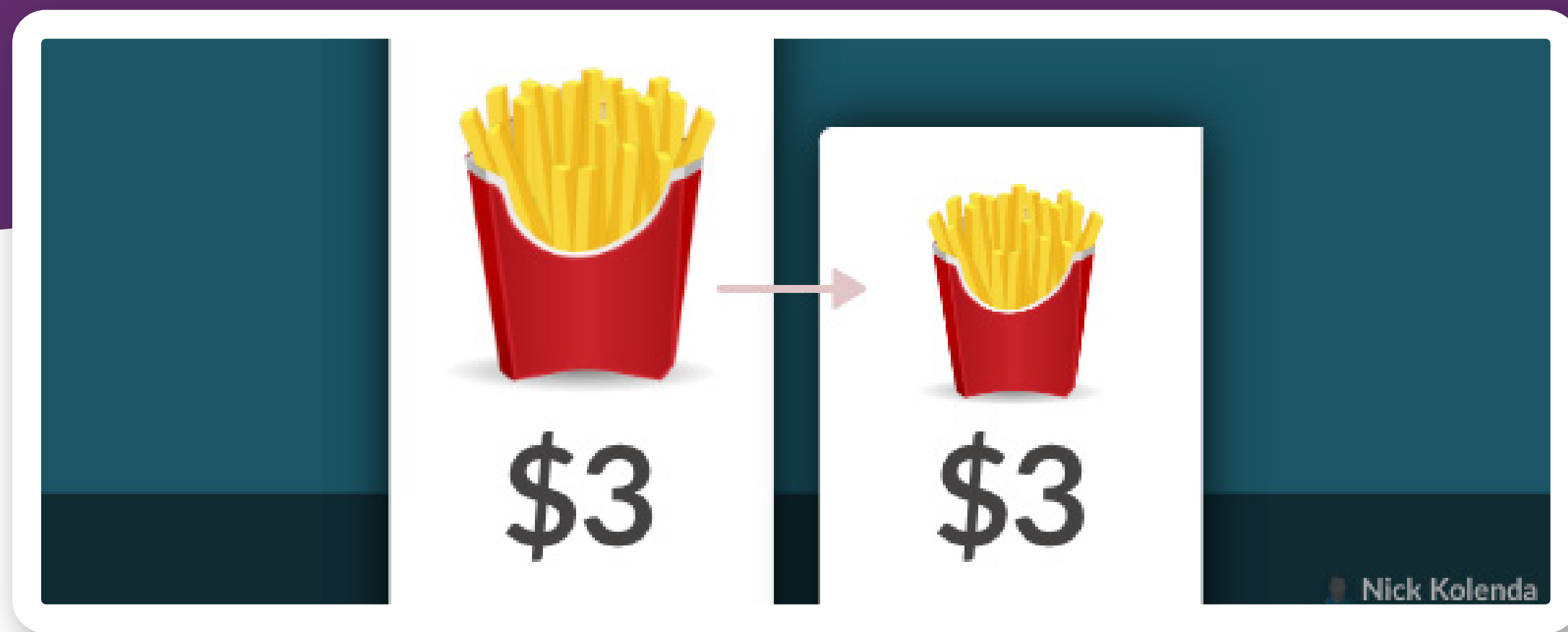
Duh.

It *seems* obvious, but many businesses fail here. They are scared to raise their price, so they wait until it's *absolutely necessary*. By that point, however, they *need* to raise their price by a wide margin.

So, what should you do?

Use frequent (yet smaller) prices changes. Avoid waiting until the moment of desperation.

Plus, if your price stays the same for years, then customers become accustomed to this price. Any change will be highly noticeable.



Downsize Features Besides Price

You can change prices without changing the numerals.

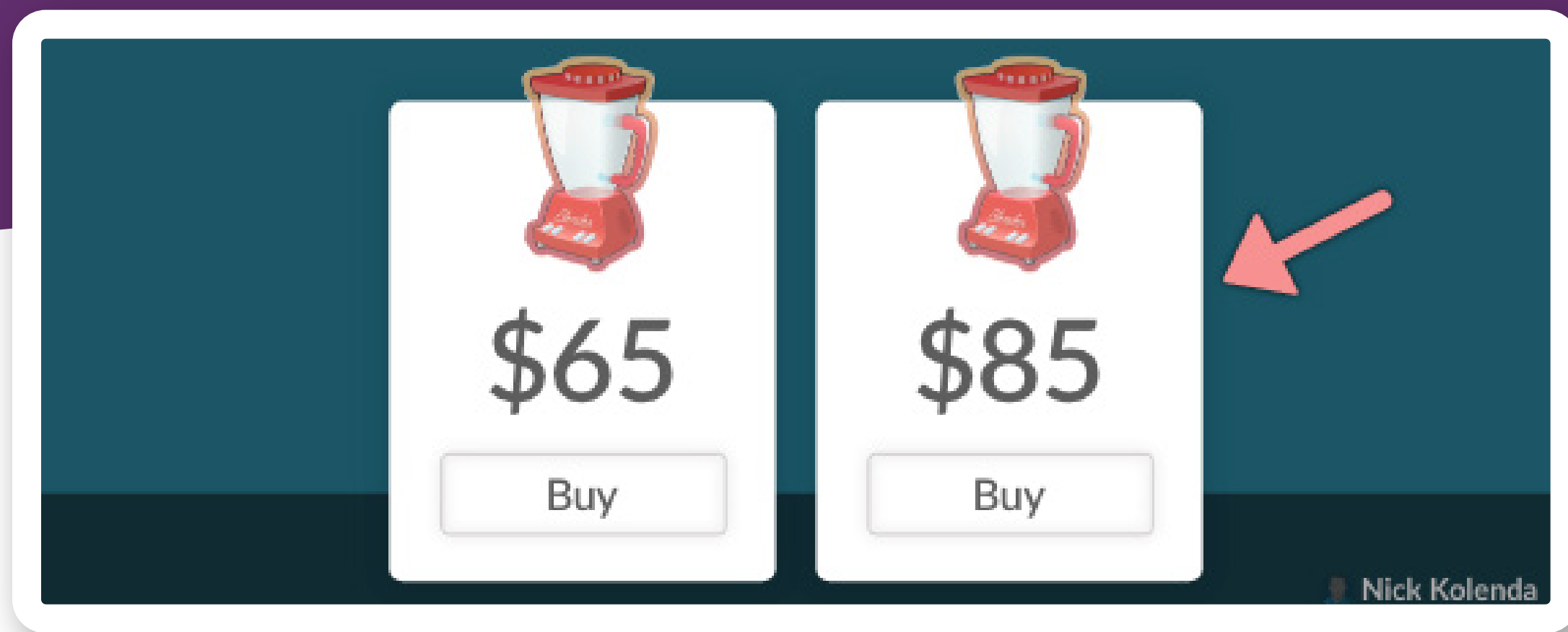
If customers are highly price sensitive, adjust a feature that is less noticeable, like physical size. Lower costs will increase your margins without alerting people to the negative change.

If you downsize physical size, reduce the size by all three dimensions – height, width, length – which becomes less noticeable (Chandon & Ordabayeva, 2009).

But obviously, be transparent and use your judgment. Don't take advantage of customers.

REFERENCES

Chandon, P., & Ordabayeva, N. (2009). Supersize in one dimension, downsize in three dimensions: Effects of spatial dimensionality on size perceptions and preferences. *Journal of Marketing Research*, 46(6), 739-753.



Offer a Similar (Yet Expensive) Version

You might be familiar with a popular study involving three subscriptions to *Economist* magazine:

- **\$59** – Digital
- **\$125** – Print
- **\$125** – Print and Digital

At first glance, it seems wrong. You can buy the digital *and* print for the same price as the print subscription.

But alas, it's not a mistake.

Although nobody chooses the “print” subscription, this decoy option shifts demand toward the “print and digital” subscription – which is more expensive than the digital subscription (Ariely, 2008).

Consider adding a similar, yet more expensive version of your product to make your existing product seem like a better deal.

REFERENCES

Ariely, D., & Jones, S. (2008). Predictably irrational. New York, NY: Harper Audio.



**PAIN OF
PAYING**



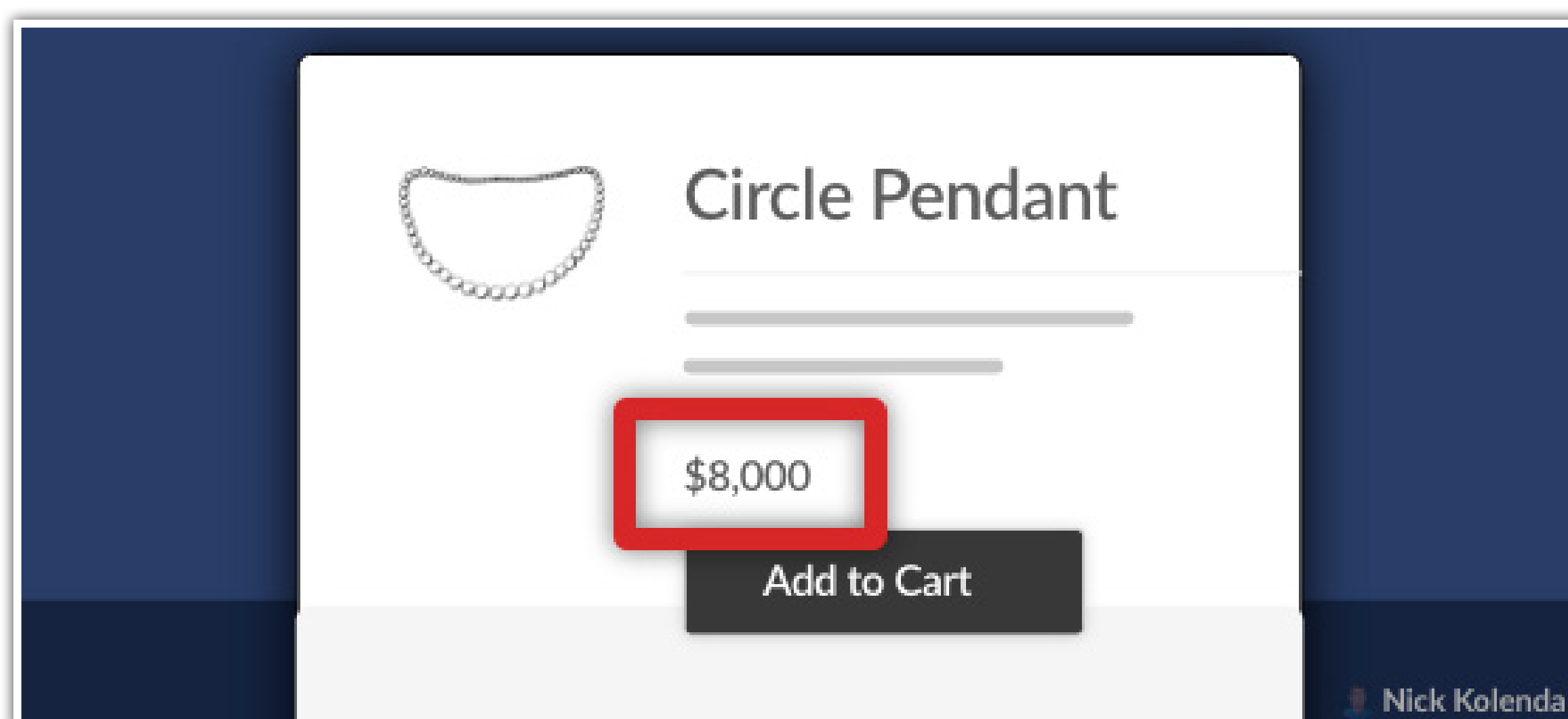
Deemphasize the Prices of Emotional Products

Emotional products have strong benefits, but weak economic value. Therefore, orient customers toward the benefits instead of the price.

How? Here are some ideas.

1. Reduce the Saliency of Prices

Do you sell jewelry? On your website, don't emphasize the prices.



2. Show Products Before the Price

According to fMRI of shoppers, the first exposure — price vs. product — dictates our decision criteria:

- **Product first?** We focus on benefits.
- **Price first?** We focus on economic value.

Therefore, show emotional products *before* prices so that customers focus on the benefits (Karmarkar, Shiv, & Knutson, 2015).

Do the opposite for rational products. Show prices so that customers focus on the economic and rational value.

3. Focus on Time and Usage

Avoid references to money. Instead, emphasize the duration of time that customers will spend.

Researchers alternated three signs for a lemonade stand:

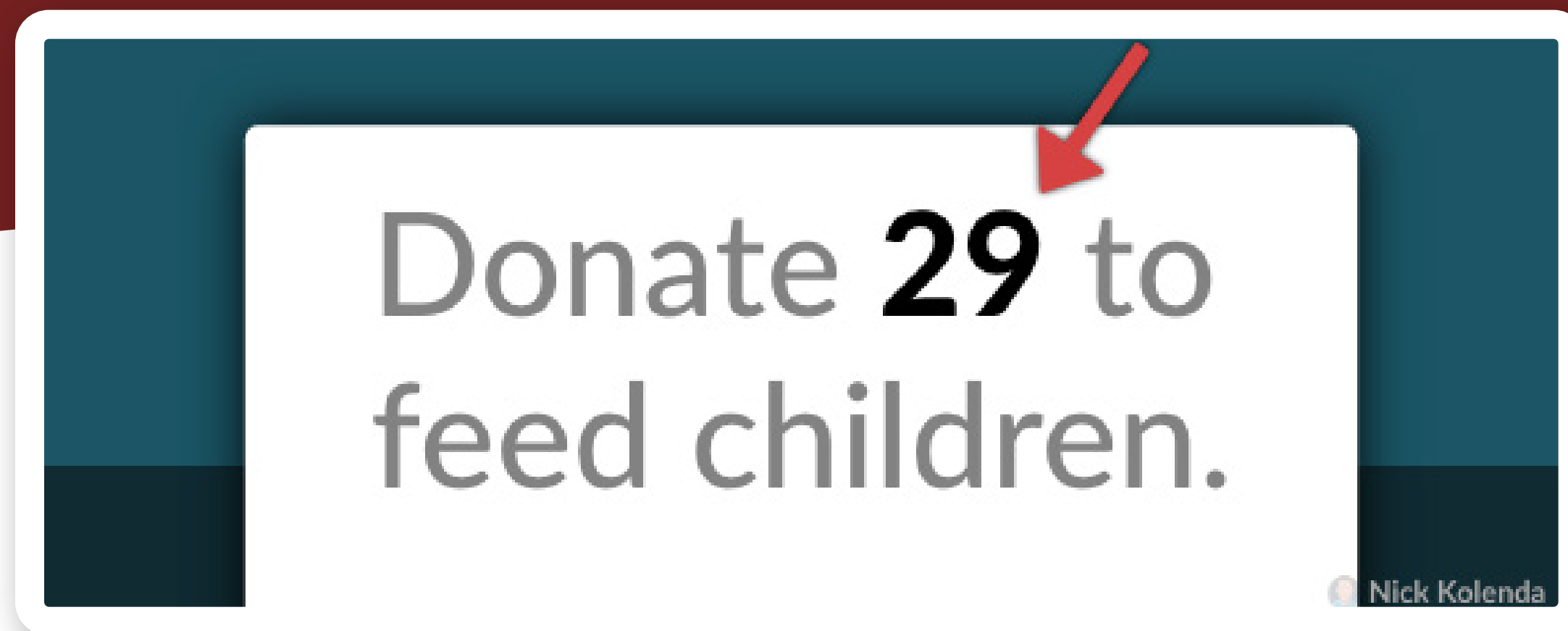
- **Time:** “Spend a little time and enjoy C & D’s lemonade”
- **Money:** “Spend a little money and enjoy C & D’s lemonade”
- **Neutral:** “Enjoy C & D’s lemonade”

The “time” sign attracted twice as many people (who paid twice as much; Mogilner & Aaker, 2009).

REFERENCES

Karmarkar, U. R., Shiv, B., & Knutson, B. (2015). Cost conscious? The neural and behavioral impact of price primacy on decision making. *Journal of Marketing Research*, 52(4), 467-481.

Mogilner, C., & Aaker, J. (2009). "The time vs. money effect": Shifting product attitudes and decisions through personal connection. *Journal of Consumer Research*, 36(2), 277-291.



Remove the Currency Symbol When Possible

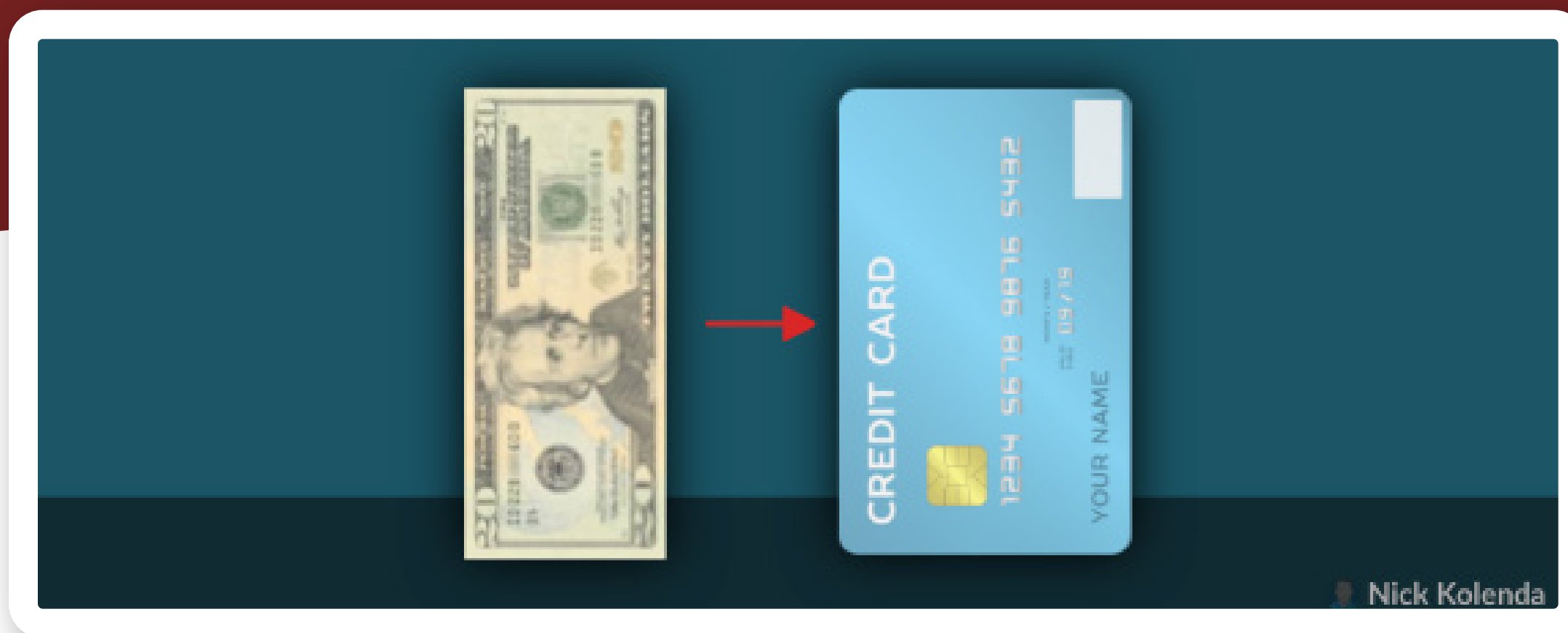
You should typically include the currency symbol in your prices — these symbols help customers understand when a number is, indeed, a price.

But if your number is clearly a price, perhaps you could remove the symbol (Yang, Kimes, & Sessarego, 2009). Removing this symbol reduces the pain of paying, distracting people from the cost.

Perhaps this tactic works best in luxury contexts, (e.g., high-end restaurant).

REFERENCES

Yang, S. S., Kimes, S. E., & Sessarego, M. M. (2009). Menu price presentation influences on consumer purchase behavior in restaurants. *International Journal of Hospitality Management*, 28(1), 157-160.



Create a Payment Medium

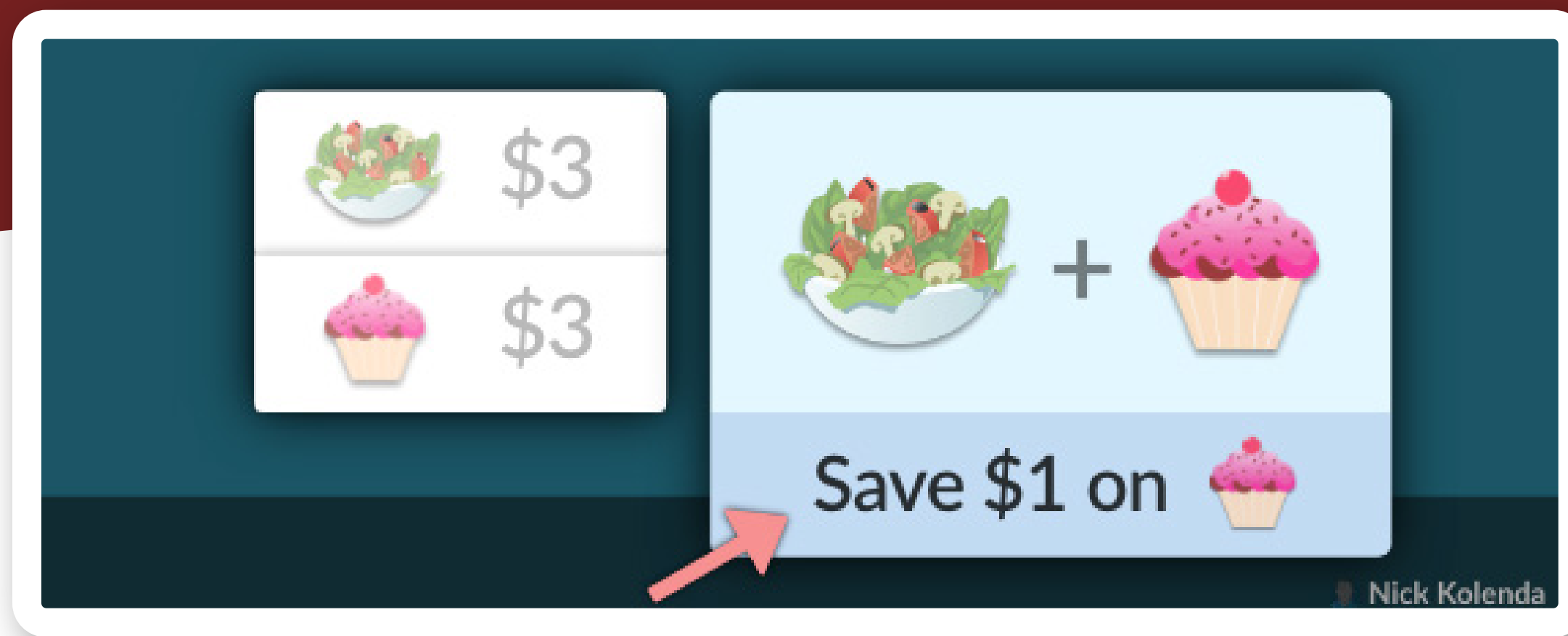
You can transform the payment into a separate medium (e.g., monthly credits, gift cards).

Customers are more likely to spend money from a separate medium because the payment feels less painful (Nunes & Park, 2003).

Perhaps you could require new customers to deposit a refundable \$10 into their account, which they can use for services. Customers will be more willing to spend this money because it resides in a separate medium.

REFERENCES

Nunes, J. C., & Park, C. W. (2003). Incommensurate resources: Not just more of the same. *Journal of Marketing Research*, 40(1), 26-38.



Attribute Discounts to Emotional Products

We want to buy emotional products, but we feel guilty (Khan & Dhar, 2006).

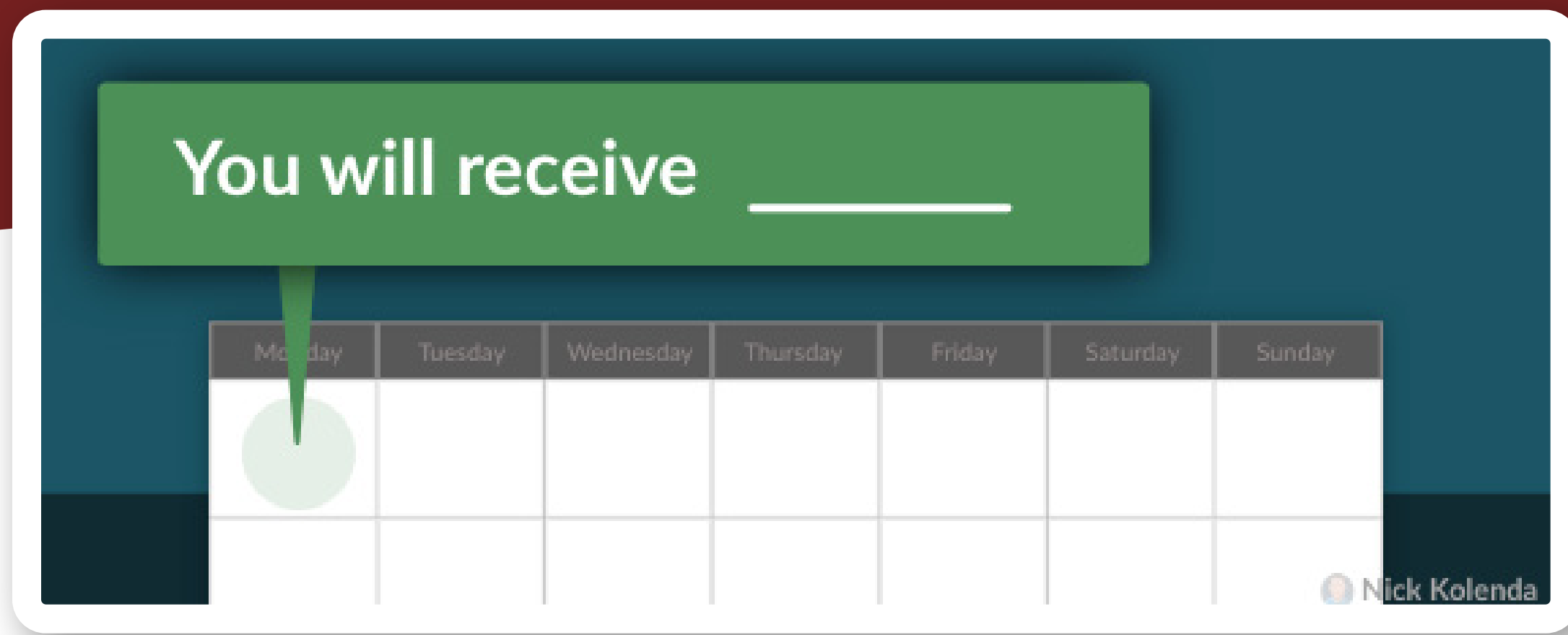
Therefore, in product bundles, attribute a discounted price to the emotional product.

...framing the discount on the hedonic item provides a justification required to reduce the guilt associated with the purchase of such items. (Khan & Dhar, 2010, p. 18)

REFERENCES

Khan, U., & Dhar, R. (2006). Licensing effect in consumer choice. *Journal of marketing research*, 43(2), 259-266.

Khan, U., & Dhar, R. (2010). Price-framing effects on the purchase of hedonic and utilitarian bundles. *Journal of Marketing Research*, 47(6), 1090-1099.



Charge Customers Before They Consume

Customers should pay *before* using your product.

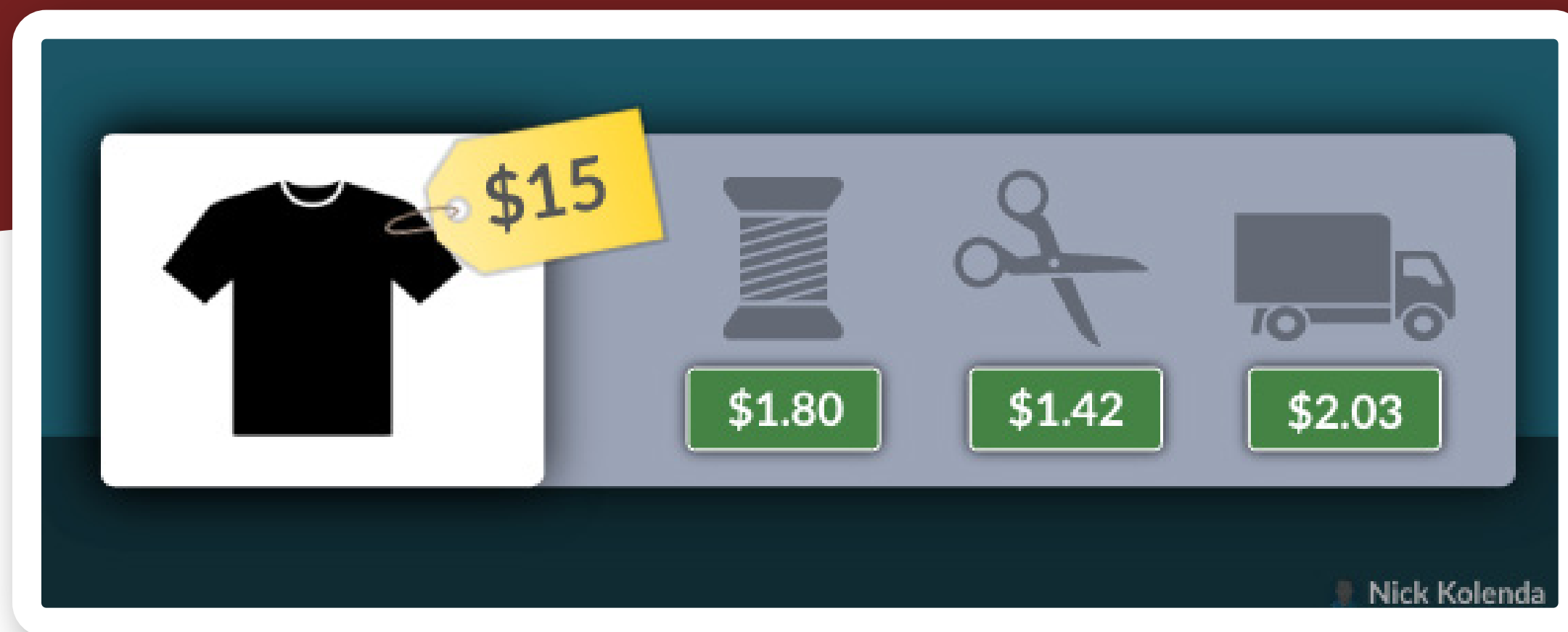
For one, you're more likely to get paid. Always nice.

Second, customers will be happier. While prepaying, they can look forward to the benefits. If they already consumed those benefits, nothing will numb the pain of paying (Prelec & Loewenstein, 1998).

If you charge customers every month, charge them at the beginning of the month.

REFERENCES

Prelec, D., & Loewenstein, G. (1998). The red and the black: Mental accounting of savings and debt. *Marketing science*, 17(1), 4-28.



Describe the Costs of Your Product

Customers prefer prices that are determined by material costs, rather than supply and demand (Xia, Monroe, & Cox, 2004).

Perhaps you can describe your costs:

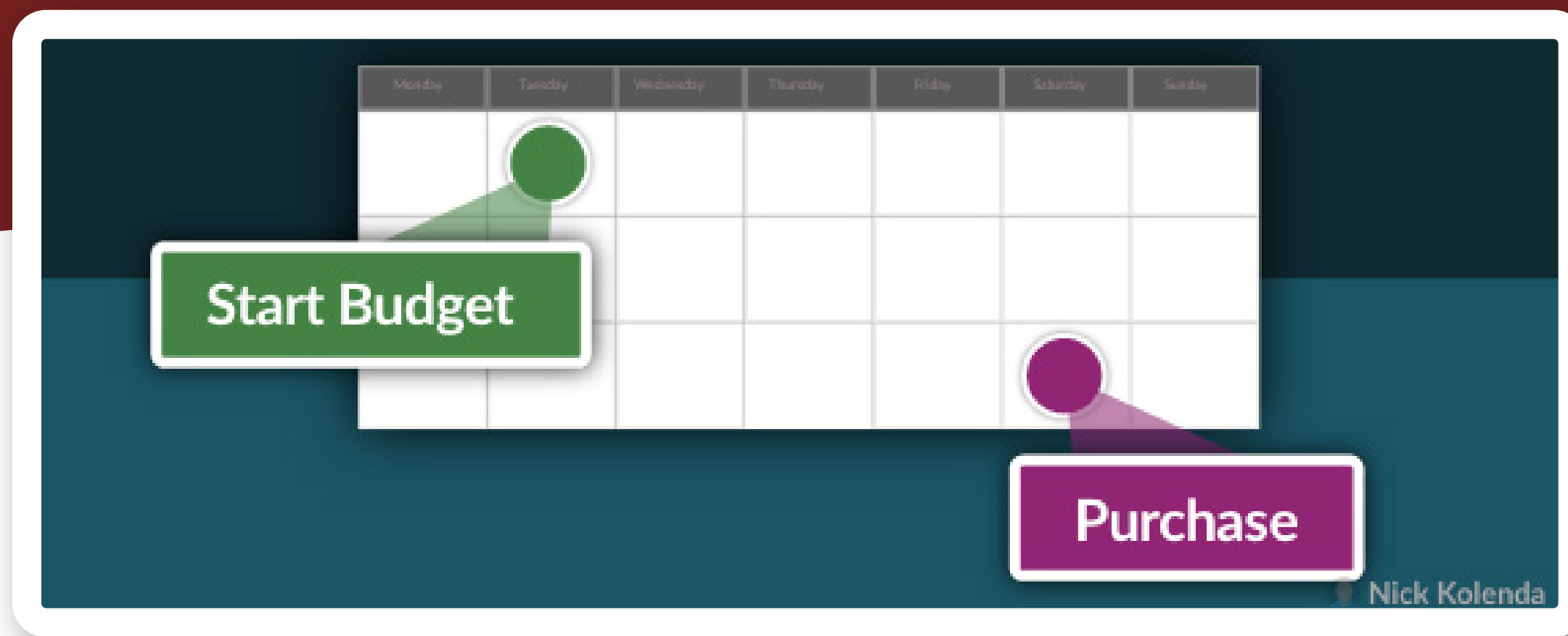
...consumers have little knowledge of a seller's actual costs and profit margins...Therefore, sellers making the relevant cost and quality information transparent helps (Xia, Monroe, & Cox, 2004, pp. 9).

Update (2020): Researchers at Harvard tested this claim. And, indeed, it works (Mohan, Buell, & John, 2020). A retailer boosted sales in an email blast by describing the costs for their wallet (e.g., leather - \$14.68, construction - \$38.56, duties - \$4.26).

REFERENCES

Mohan, B., Buell, R. W., & John, L. K. (2020). Lifting the veil: The benefits of cost transparency. *Marketing Science*, 39(6), 1105-1121.

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.



Encourage Customers to Budget Early

Budgeting is good, right?

Not always. Sometimes it *increases* spending.

Why? Early budgeting separates you from this money. As you move further away from these funds, payments feel less painful. In one study, students spent more money on a class ring when they budgeted early (Chloe & Kan, 2021).

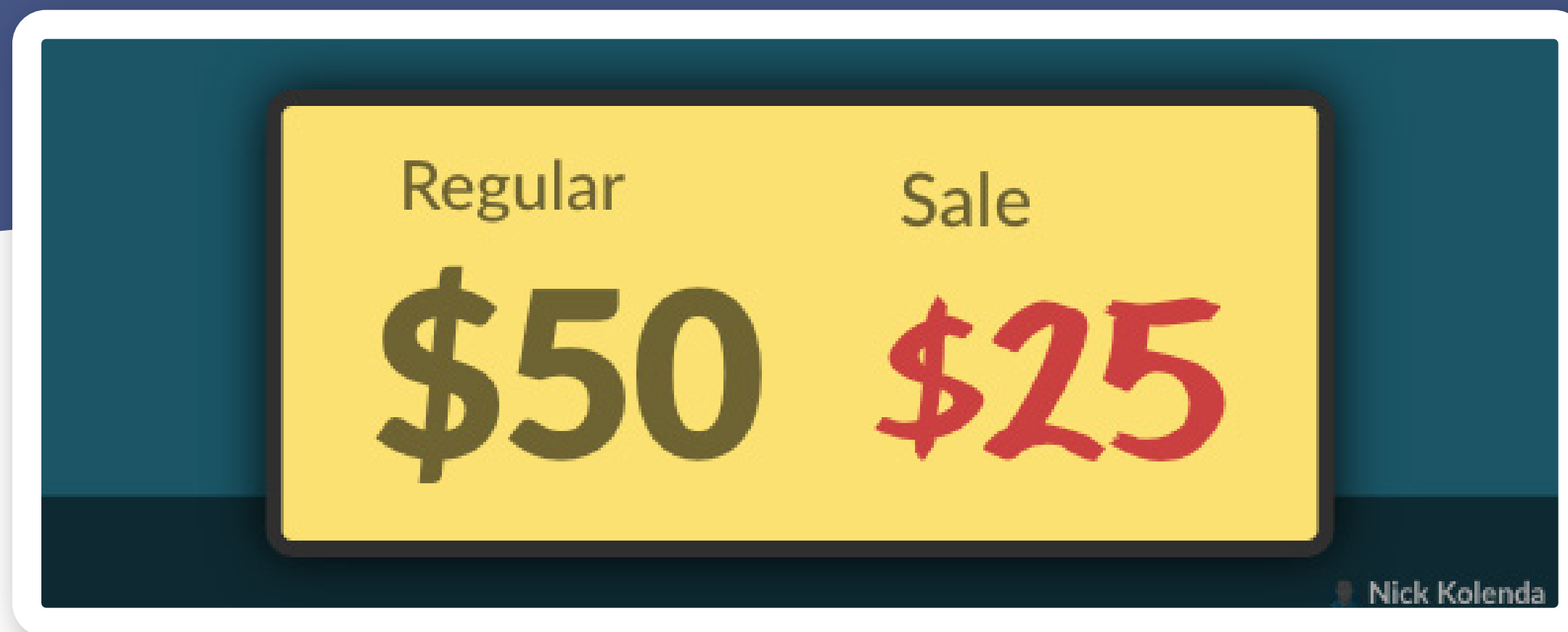
Perhaps hotels and rental car agencies should offer upgrades to customers who make reservations in advance. Or perhaps overly frugal customers should budget for a vacation farther in advance to reduce the pain of spending money.

REFERENCES

Choe, Y., & Kan, C. (2021). Budget depreciation: when budgeting early increases spending. *Journal of Consumer Research*, 47(6), 937-958.



DISCOUNTS



Make Sale Prices Look Different From Original Prices

Add visual distinctions to sales prices (e.g., color, size, font; Coulter and Coulter, 2005).

Why? Think of infomercials.

Viewers typically see the current problem in black-and-white, yet the new solution in vibrant color:

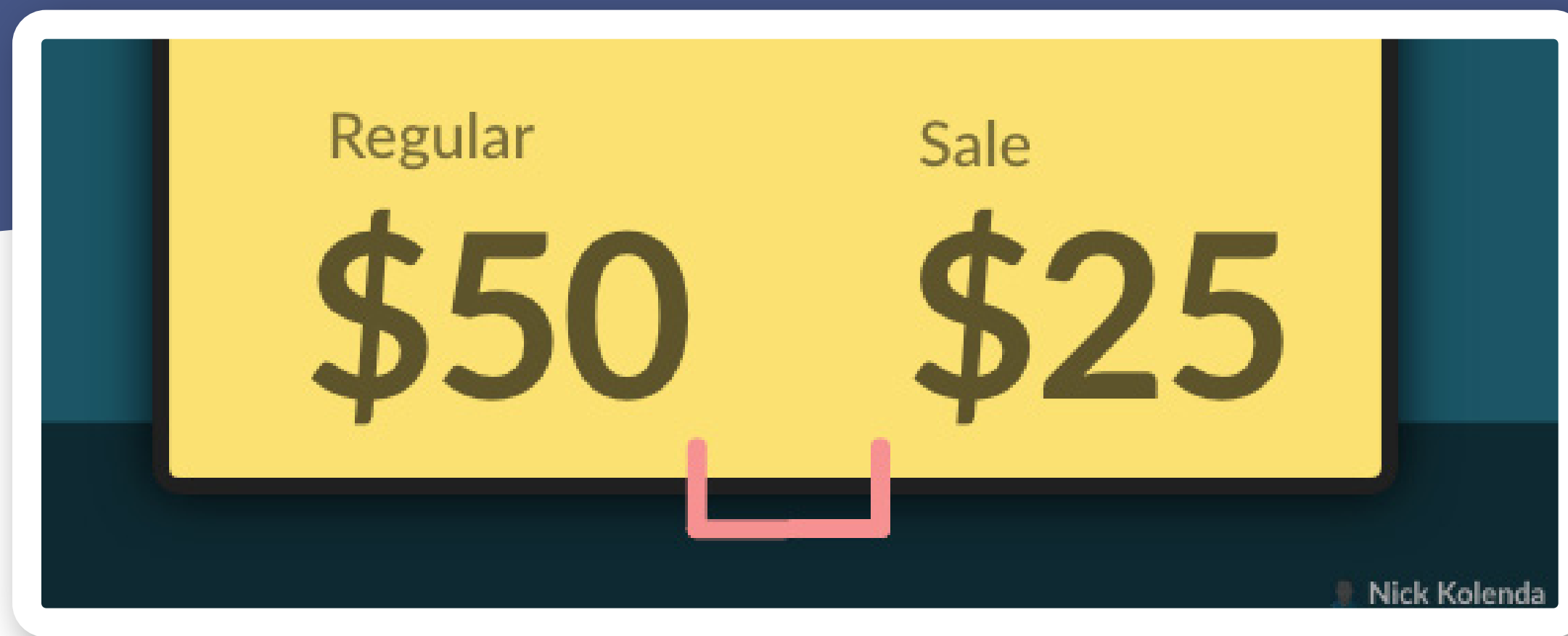


I call it *contrast fluency*. Your brain misattributes these visual distinctions to abstract distinctions: *Hmm, something seems different. This product must make a big difference.*

Likewise, with numbers: *Hmm, this sale price feels different. It must be numerically different.*

REFERENCES

Coulter, K. S., & Coulter, R. A. (2005). Size does matter: The effects of magnitude representation congruency on price perceptions and purchase likelihood. *Journal of Consumer Psychology*, 15(1), 64-76.



Add Space Between Discounted Prices

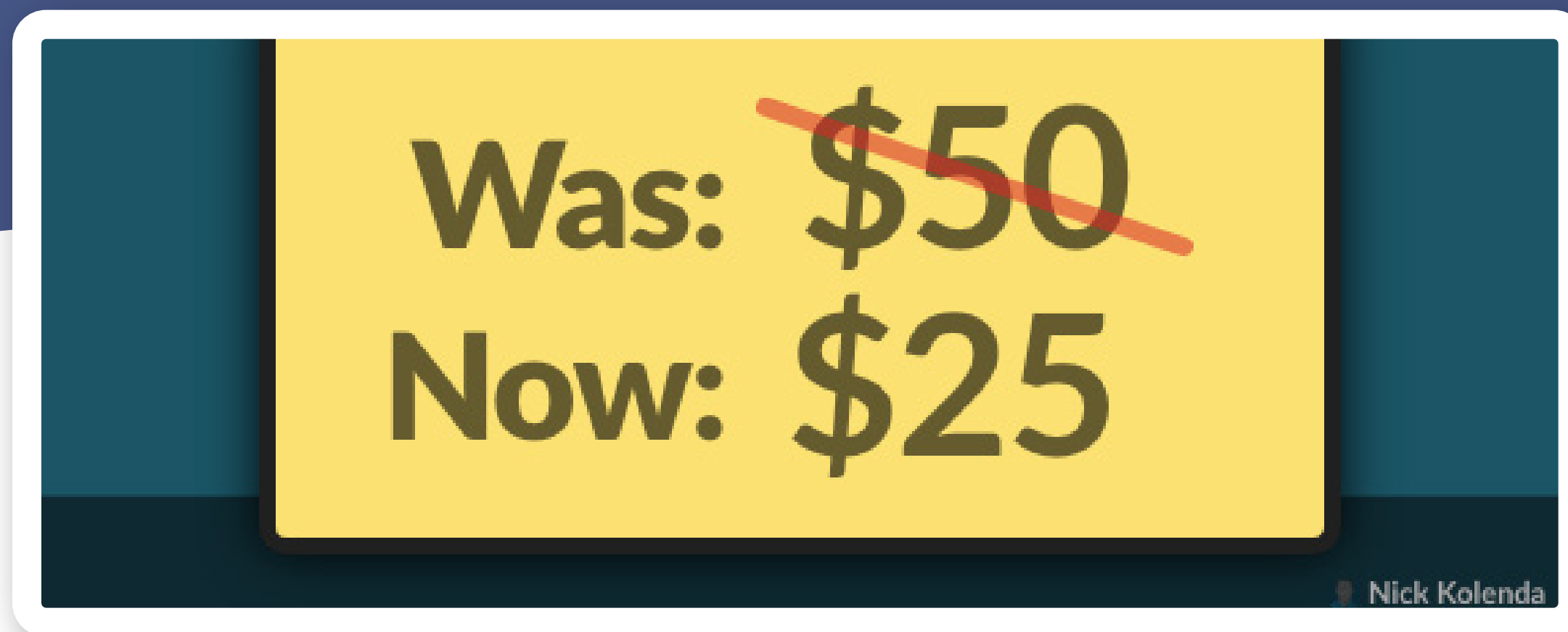
You conceive numbers along a horizontal ruler.

Thanks to this cognitive structure, you confuse *visual* distance for *numerical* distance: Numbers seem numerically further when they are visually further from each other (Coulter & Norberg, 2009).

Add space between your original and sale prices so that the numerical gap seems larger.

REFERENCES

Coulter, K. S., & Norberg, P. A. (2009). The effects of physical distance between regular and sale prices on numerical difference perceptions. *Journal of Consumer Psychology*, 19(2), 144-157.



Place Sale Prices Below Original Prices

When possible, arrange discounts vertically (Feng, Suri, Chao, & Koc, 2017).

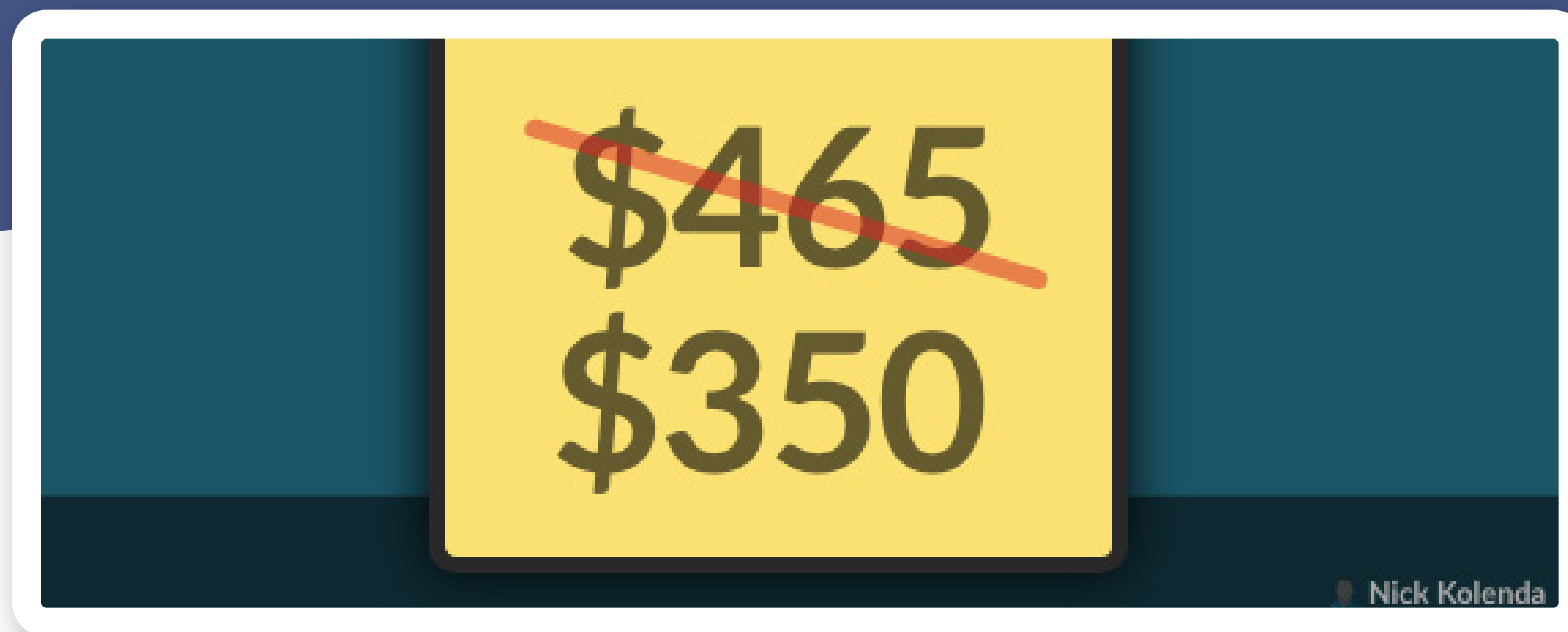
Vertical numbers are easier to subtract because of the digit-by-digit comparison. And easy calculations enlarge the gap between numbers (Thomas & Morwitz, 2009).

Caveat: Horizontal formats work better for small discounts because they impede the calculation.

REFERENCES

Feng, S., Suri, R., Chao, M. C. H., & Koc, U. (2017). Presenting comparative price promotions vertically or horizontally: Does it matter?. *Journal of Business Research*, 76, 209-218.

Thomas, M., & Morwitz, V. G. (2009). The ease-of-computation effect: The interplay of metacognitive experiences and naive theories in judgments of price differences. *Journal of Marketing Research*, 46(1), 81-91.

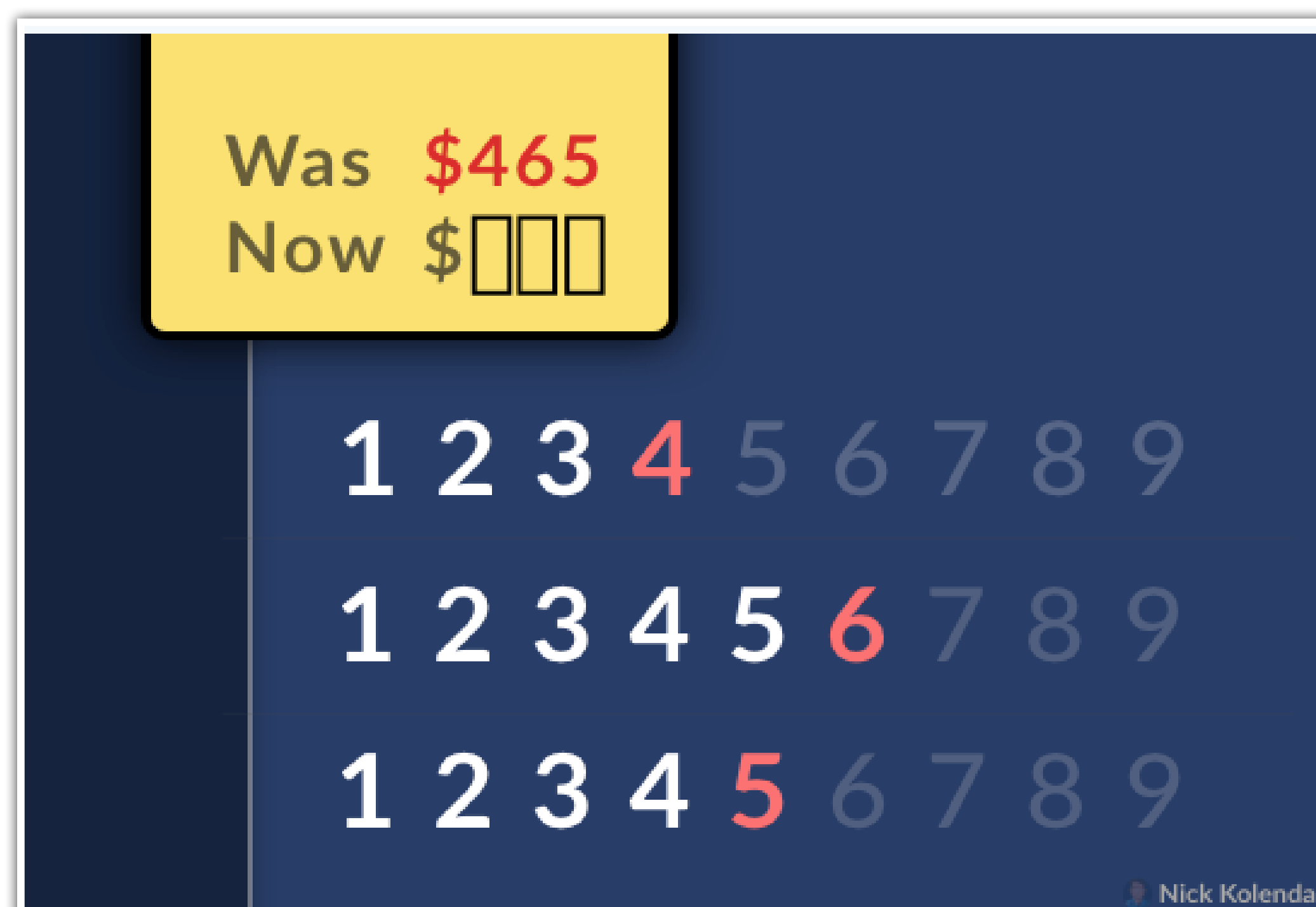


Reduce Every Digit in the Discounted Price

You compare numbers in a digit-by-digit manner.

Therefore, reduce *every* digit in your sale price (see Korvorst & Damian, 2008). If your price is \$465, aim for a discounted price in every digit.

You could choose from these numerals:

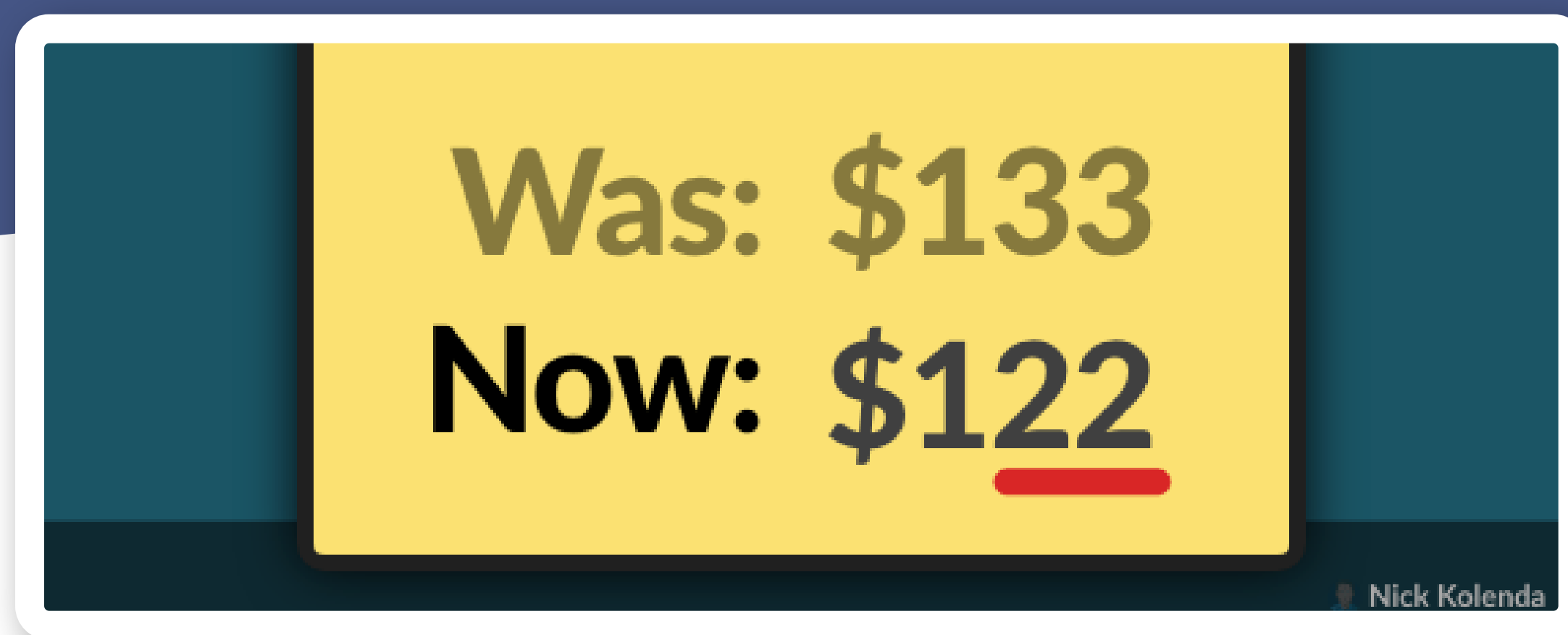


Caveat: Perhaps keep the rightmost digit the same. It will ease the subtraction of the leftmost digits (Hung et al., 2021).

REFERENCES

Hung, H. H., Cheng, Y. H., Chuang, S. C., Yu, A. P. I., & Lin, Y. T. (2021). Consistent price endings increase consumers perceptions of cheapness. *Journal of Retailing and Consumer Services*, 61, 102590.

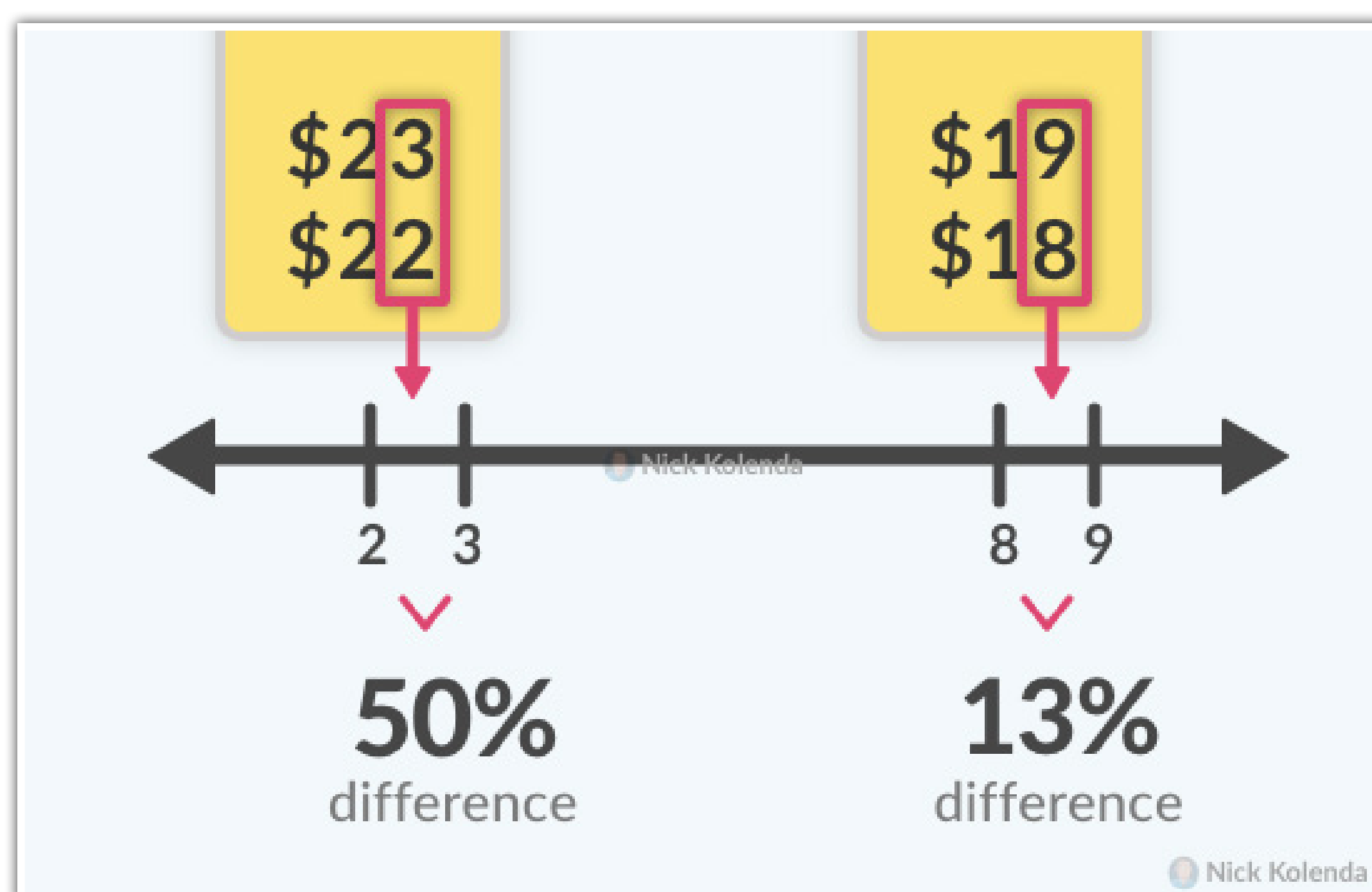
Korvorst, M., & Damian, M. F. (2008). The differential influence of decades and units on multidigit number comparison. *Quarterly Journal of Experimental Psychology*, 61(8), 1250-1264.



Offer Discounts With Low Right Digits

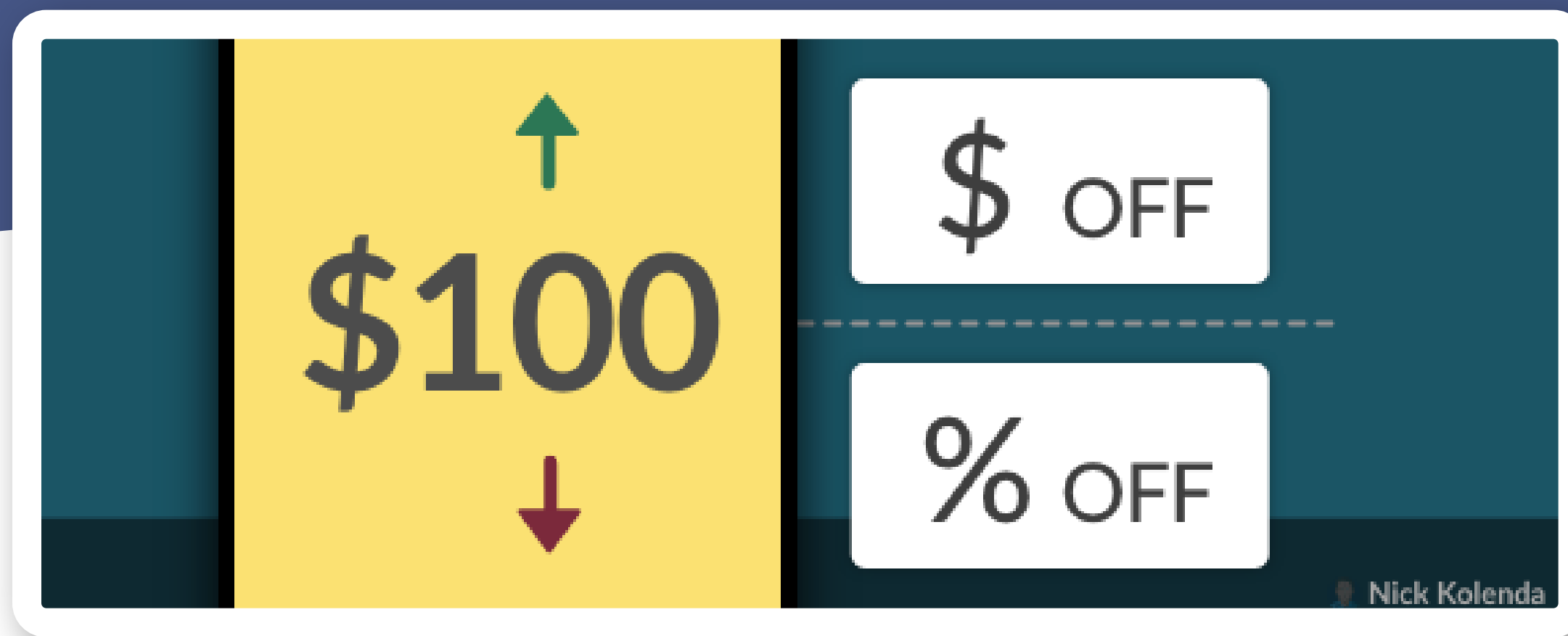
Show small numerals in the rightmost digits of your sale price. Small digits enlarge the perceived gap:

...because 3 is 50% greater than 2, and 8 is 14% greater than 7, the absolute difference between 2 and 3 is perceived to be greater than that between 7 and 8, even though their absolute differences are identical. (Coulter & Coulter, 2007, p. 163)



REFERENCES

Coulter, K. S., & Coulter, R. A. (2007). Distortion of price discount perceptions: The right digit effect. *Journal of Consumer Research*, 34(2), 162-173.



Follow the Rule of 100

Should discounts be **percentages** or **absolutes**?

Consider a \$150 blender. Should you offer 20% off? Or an equivalent \$30 off?

Answer:

- **Over \$100?** Give absolutes (e.g., \$30)
- **Under \$100?** Give percents (e.g., 20%)

In both cases, you show the higher numeral. For a \$50 blender, 20% off is the same as \$10 off — yet 20% is more persuasive because it's a higher numeral. For a \$150 blender, the absolute discount (\$30 off) is a higher numeral (González, Esteva, Roggeveen, & Grewal, 2016).

REFERENCES

González, E. M., Esteva, E., Roggeveen, A. L., & Grewal, D. (2016). Amount off versus percentage off—when does it matter?. *Journal of Business Research*, 69(3), 1022-1027.



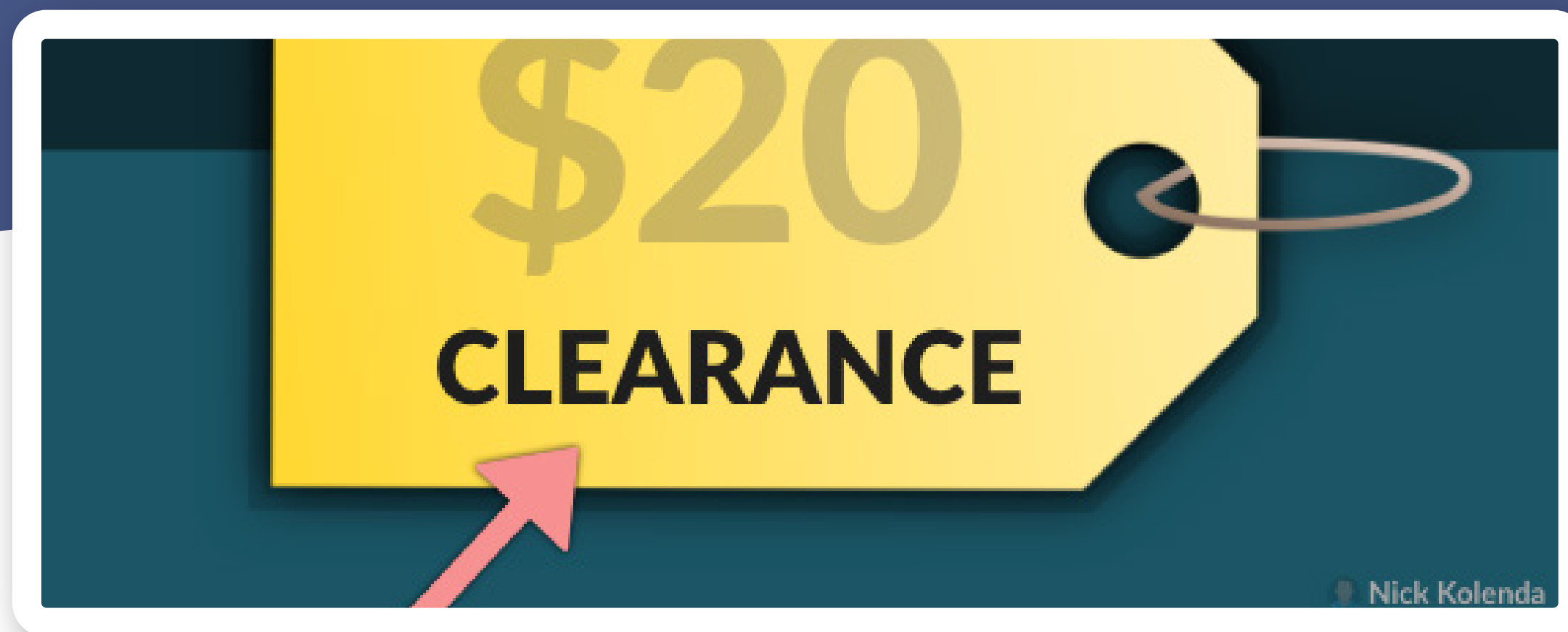
Mention the Increase From the Discounted Price

Most discounts emphasize the *decrease* in price: “Now 20% off.”

But the reverse framing — “Was 25% higher” — is more persuasive because it shows a higher numeral (Guha et al., 2018).

REFERENCES

Guha, A., Biswas, A., Grewal, D., Verma, S., Banerjee, S., & Nordfält, J. (2018). Reframing the discount as a comparison against the sale price: does it make the discount more attractive?. *Journal of Marketing Research*, 55(3), 339-351.



Provide a Reason for the Discount

Explain *why* you're offering a discount.

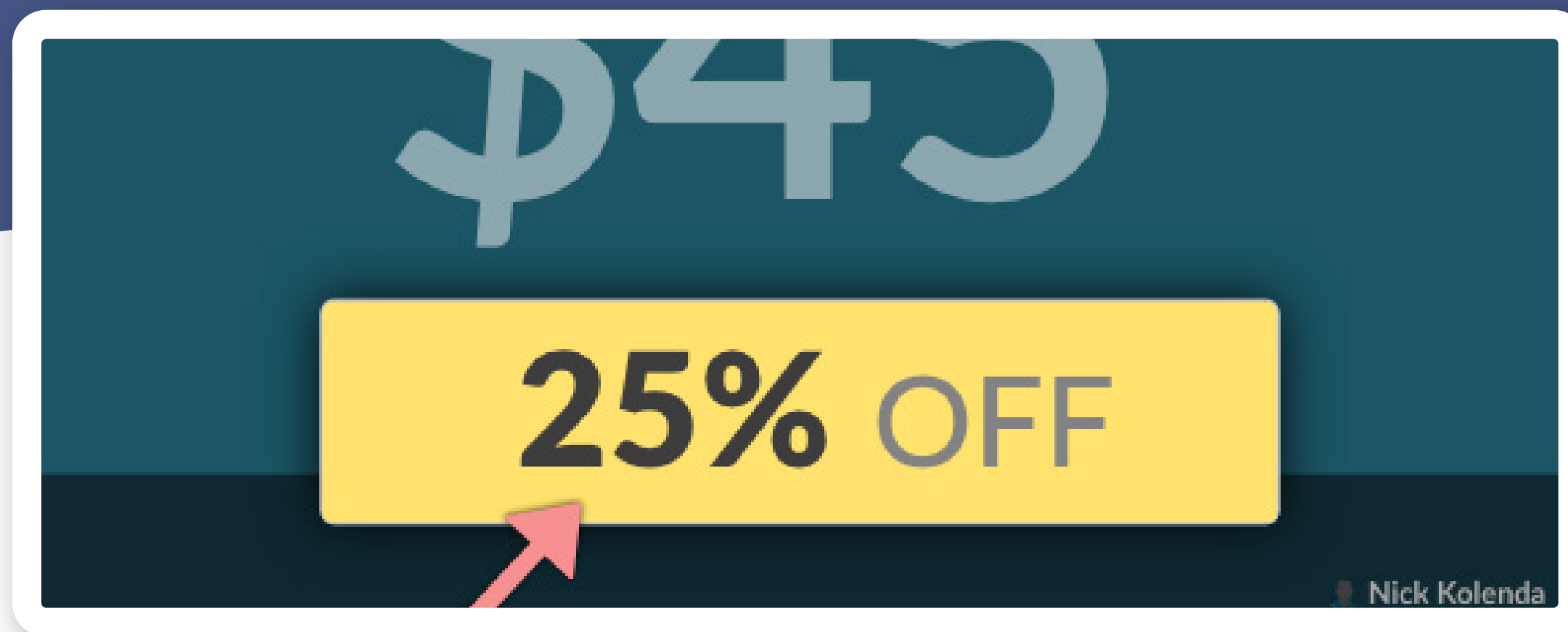
This discount will seem temporary, so it won't impact the customer's long-term reference price. Without this reason, your discount will make future prices seem more expensive.

Plus, if the discount seems temporary, customers will be more apt to pounce on it. Perhaps you could mention a "clearance" sale. Or you could refer to supplier price cuts:

[some stores] often convey the message that additional cost savings they are able to obtain from suppliers are being passed on to customers... presumably to minimize the negative effects of promotions (Mazumdar, Raj, & Sinha, 2005, p. 88)

REFERENCES

Mazumdar, T., Raj, S. P., & Sinha, I. (2005). Reference price research: Review and propositions. *Journal of marketing*, 69(4), 84-102.



Offer Discounts in Round Numbers

Recall that specific prices (e.g., \$21.87) seem smaller (Thomas, Simon, & Kadiyali, 2007).

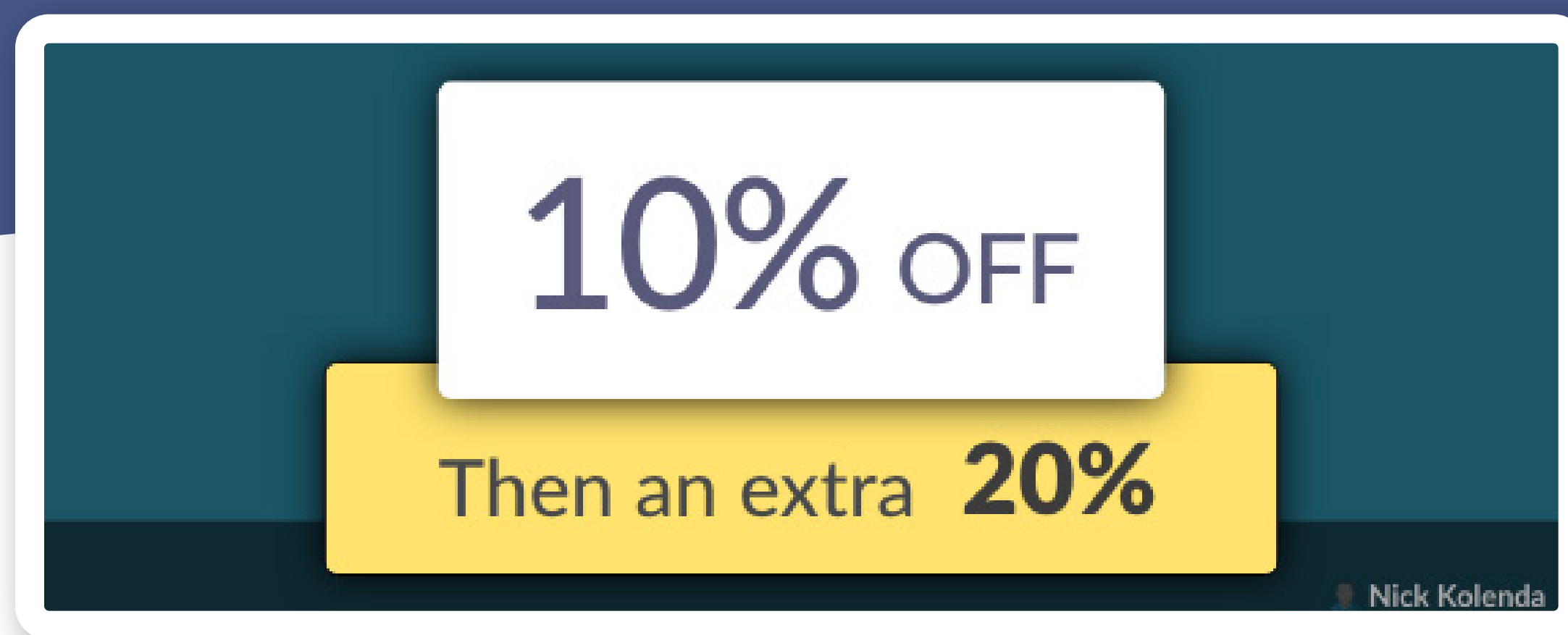
Follow the opposite approach for discounts. Since you want to *enlarge* discounts, choose round numerals.

Plus, it will be easier to calculate — which will make your discount seem larger (Thomas & Morwitz, 2009).

REFERENCES

Thomas, M., & Morwitz, V. G. (2009). The ease-of-computation effect: The interplay of metacognitive experiences and naive theories in judgments of price differences. *Journal of Marketing Research*, 46(1), 81-91.

Thomas, M., Simon, D. H., & Kadiyali, V. (2007). Do consumers perceive precise prices to be lower than round prices? Evidence from laboratory and market data. Evidence from Laboratory and Market Data (September 2007). Johnson School at Cornell University Research Paper, (09-07).



Give Two Discounts in Ascending Order

Two gains are often preferred to a single lump sum (Kahneman & Tversky, 1979).

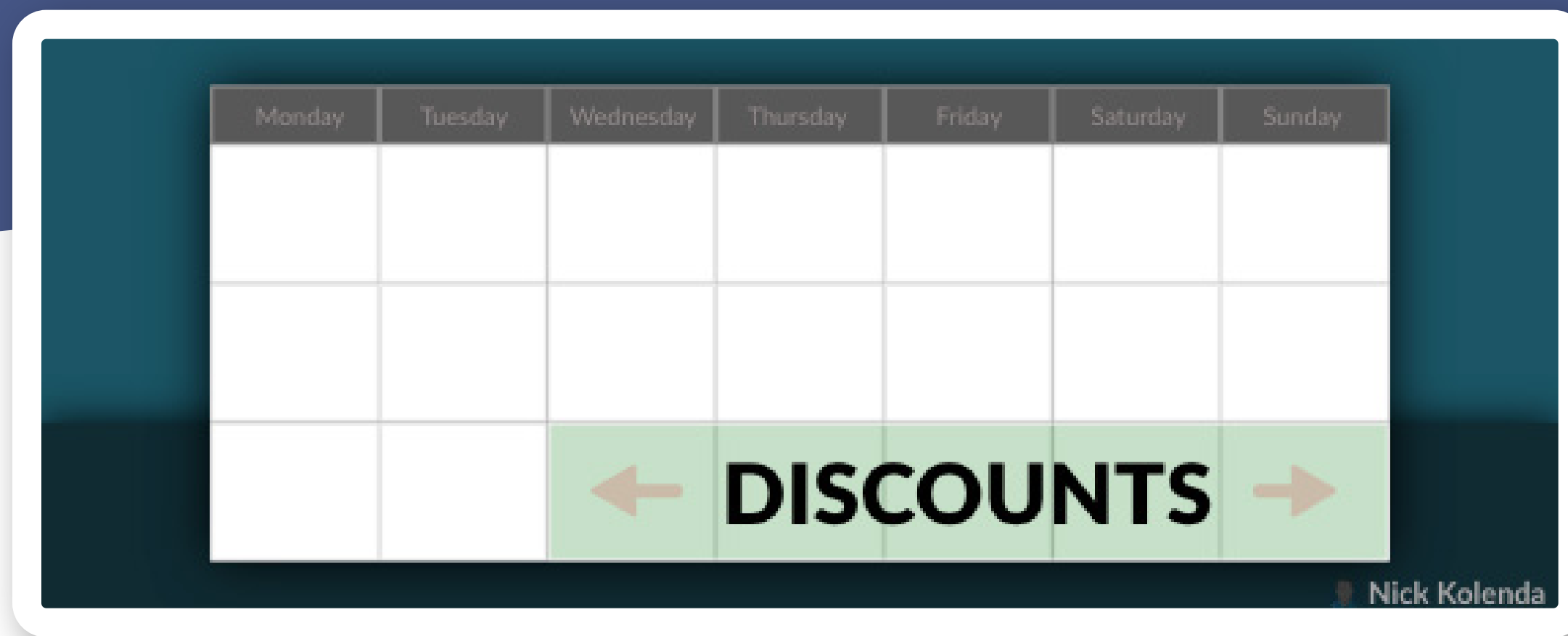
Therefore, double discounts can be helpful: Perhaps offer 10% then an extra 40%.

If possible, arrange these discounts in ascending order: 10% *then* 40%. Ascending momentum makes the total discount seem larger (Gong, Huang, & Goh, 2019).

REFERENCES

Gong, H., Huang, J., & Goh, K. H. (2019). The illusion of double-discount: using reference points in promotion framing. *Journal of Consumer Psychology*, 29(3), 483-491.

Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica*, 47(2), 263-292.



Offer Discounts Toward the End of the Month

Payments are more painful when they come from a small budget (Soster, Gershoff, & Bearden, 2014).

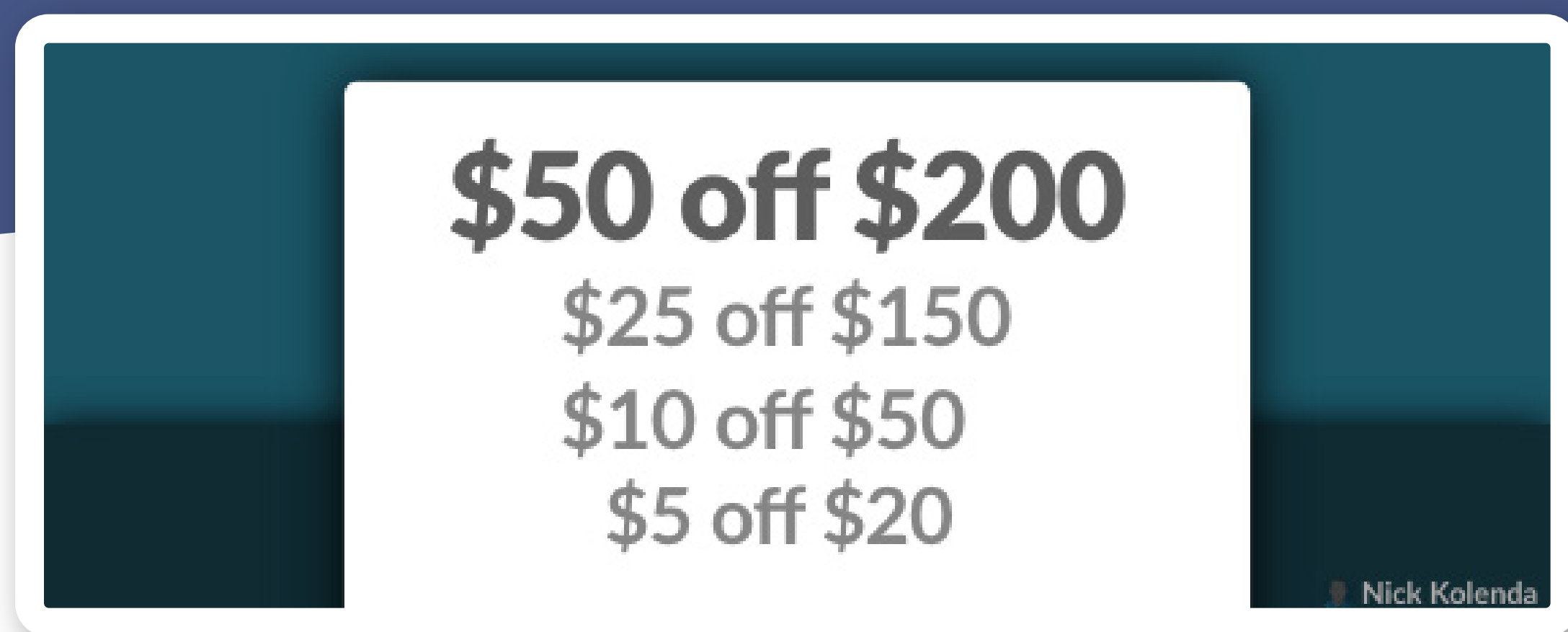
Discounts are more effective toward the ends of months because people have depleted their monthly budgets, and they are seeking ways to save money.

Or give free trials at the beginnings of months when budgets are higher:

[free trials] might be better timed at the beginning of the month, or immediately after consumers receive tax refunds, in order to ensure that budgets are not approaching exhaustion at the time of purchase (Soster, Gershoff, & Bearden, 2014, pp. 672-673).

REFERENCES

Soster, R. L., Gershoff, A. D., & Bearden, W. O. (2014). The bottom dollar effect: the influence of spending to zero on pain of payment and satisfaction. *Journal of Consumer Research*, 41(3), 656-677.



Arrange Discounts in Tiered Amounts

Suppose that customers get \$50 off when they spend \$200.

In this scenario, customers need to spend \$200 — which might be tough to imagine. In order to make this discount more realistic (and thus enticing), businesses need to strengthen the mental imagery of spending \$200.

How? They can offer tiered discounts.

- \$50 off \$200
- \$25 off \$150
- \$10 off \$50
- \$5 off \$20

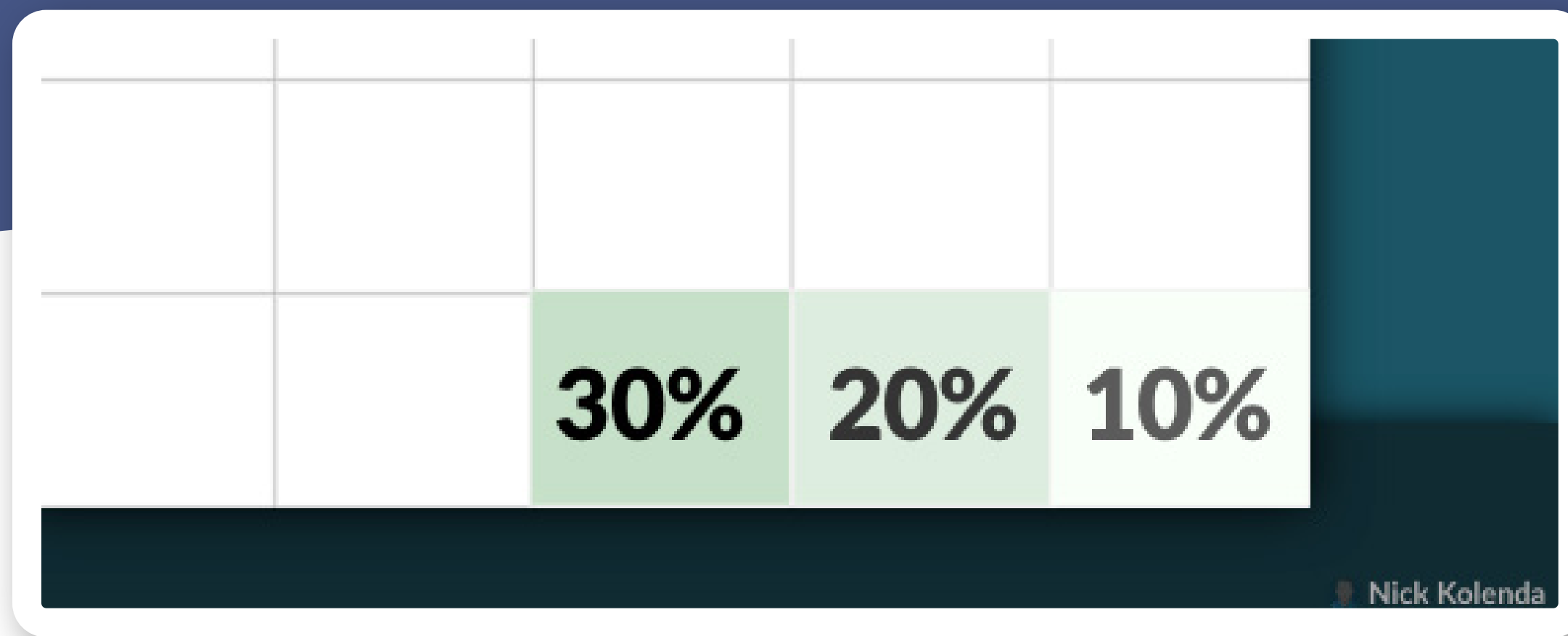
Customers might struggle to imagine the \$200 threshold, but the lowest tier — \$20 — is easy to imagine.

And now it gets sneaky: Once they imagine spending \$20, it becomes easier to imagine the next threshold of \$50.

Then it becomes easy to imagine \$150. Then \$200.

Lower tiers provide a sequence of images that transform a high threshold into a feasible reality.

Deep Dive: Pick up my book [Imagine Reading This Book](#) to learn the detailed mechanism behind this “simulation fluency.”



End Discounts Gradually

Consider the price of a television. Most businesses choose one of two pricing strategies:

- **Hi-Lo Pricing.** \$999...then \$799...then \$999.
- **Everyday Low Pricing.** \$919 every week.

But recently, there's a new strategy called *steadily decreasing discounts*. You gradually retract a discount:

\$999...then \$799...then \$899...then \$999

Over a 30-week span, researchers tested all three pricing strategies for a \$24.95 wine bottle stopper. Revenue was highest with the gradual retraction (Tsiros & Hardesty, 2010).

REFERENCES

Tsiros, M., & Hardesty, D. M. (2010). Ending a price promotion: retracting it in one step or phasing it out gradually. *Journal of marketing*, 74(1), 49-64.



Don't Discount Premium Products

Retracting discounts can be harmful. Customers might wait for the next discount or choose a competitor.

This detriment is particularly common for premium products (Wathieu, Muthukrishnan, & Bronnenberg, 2004).

Discounts on premium products are less common, so this scenario pushes attention toward prices — which doesn't help when your price is already high.

If you sell premium products, avoid discounts. Keep emphasizing the quality of your product.

REFERENCES

Wathieu, L., Muthukrishnan, A. V., & Bronnenberg, B. J. (2004). The asymmetric effect of discount retraction on subsequent choice. *Journal of Consumer Research*, 31(3), 652-657.

Next Step...

You mastered the *perception* of prices.

But how do you find the optimal price? A price that maximizes your revenue?

For this next step, I compiled step-by-step methodologies in my course on Pricing:

www.NickKolenda.com/video-courses