

## **Behavioral Economics in Decision Making**

### Assignment #2: A/B Test Design

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#### **Context and Motivation**

Ring, a leading smart home security company owned by Amazon, offers a wide range of products, including video doorbells, security cameras, and alarm systems. The primary goals of the Ring website are to effectively educate potential customers about its offerings, help them navigate the product options, and ultimately drive sales.

A behavioral audit of the current Ring website through the lens of choice architecture and information design principles covered in class reveals several potential areas for improvement:

1. Choice Overload: The "Shop All" page presents an extensive array of product options across multiple categories. This could potentially overwhelm users, especially those new to smart home security. As we learned, too many choices can lead to decision paralysis and hurt conversion rates.
2. Lack of Prioritization: While a "Best Sellers" section is highlighted, it's unclear what criteria determine which products are featured. Drawing on the concept of sorting options to prioritize recommended choices, Ring could test alternative merchandising strategies to guide customers.
3. Hidden Pricing: Prices are not disclosed on the main product grid, requiring users to click through for details. This creates extra friction and obscures a key decision factor. We know from principles of information architecture that making important information salient can aid decision-making.
4. Absence of Social Proof: The main shop page lacks customer ratings, reviews, or popularity signals that could build trust and guide purchases. Social proof is a powerful motivator we discussed in class.

#### **Hypothesis**

Redesigning the Ring "Shop All" page to reduce choice overload, highlight recommended products, show prices up-front, and incorporate social proof will increase product exploration and purchase conversion compared to the current design.

#### **Parameters**

- Target Population: All U.S. visitors to the Ring.com "Shop All" page on desktop and mobile web
- Sample Size: Using baseline conversion rate of 5% and minimum detectable effect of 10%, a sample size of 776,000 unique users split evenly between control and treatment is needed to reach 80% power and 95% significance
- Control (A): Current "Shop All" design with all products shown in a grid without prices or reviews
- Treatment (B): Alternate "Shop All" design with the following changes:

- Collapsed product category sections that show a curated set of 5 "Editor's Picks" per category
- "Best Sellers" section expanded to a full row showing top 10 products with price and star rating under each
- "Top Deals" row added to highlight 5-10 best discounted products with savings shown as "X% off"
- Average rating and total reviews displayed under each product in the main grid
- Primary Success Metric: Purchase conversion rate (orders / unique visitors)
- Secondary Metrics: Click-through rate from Shop All to product pages, average order value, engagement with "Best Sellers" and "Deals" sections, product-specific conversion rates, performance segmented by new vs. returning users
- Analysis: Two-sample proportion t-test to compare conversion rate between control and treatment with alpha of 0.05. Also analyze lift in secondary metrics and segment performance.

## **Limitations and Future Opportunities**

One limitation of this test is that it focuses heavily on optimizing the initial product browsing experience but doesn't address potential pain points or drop-off further down the purchase funnel which could cap overall revenue impact. A full-funnel analysis and testing roadmap should be developed.

Additionally, the current test leans into pricing and popularity as key decision levers. Future experiments could explore the impact of other choice architectures and information designs such as:

- Guided selling based on user needs or intent
- Elevated educational content and product comparison tools
- Personalized recommendations and recently viewed modules
- Urgency triggers like low-stock or sale countdown timers
- Shipping cost and speed promises

## **References to Behavioral Principles**

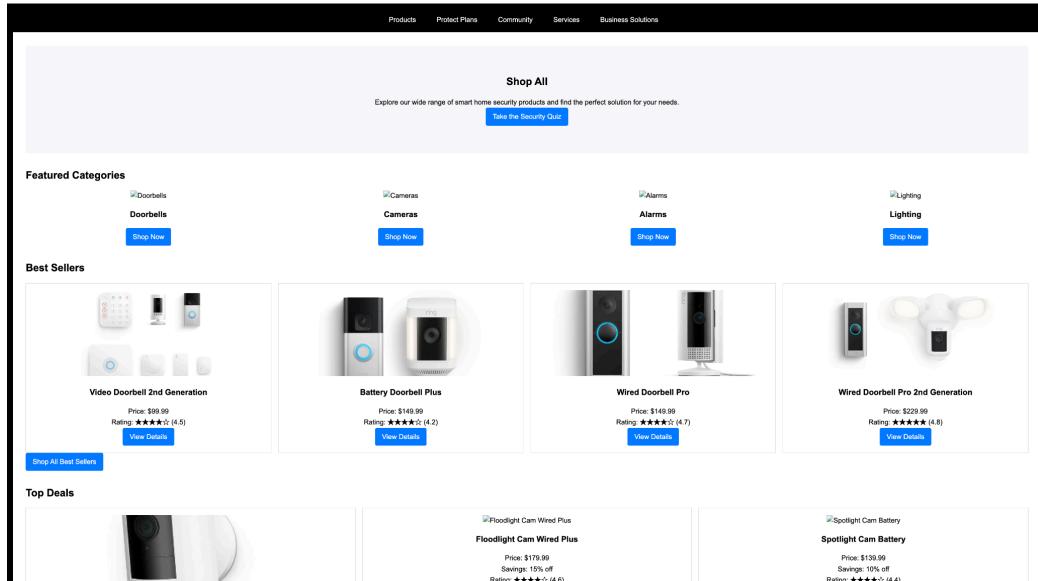
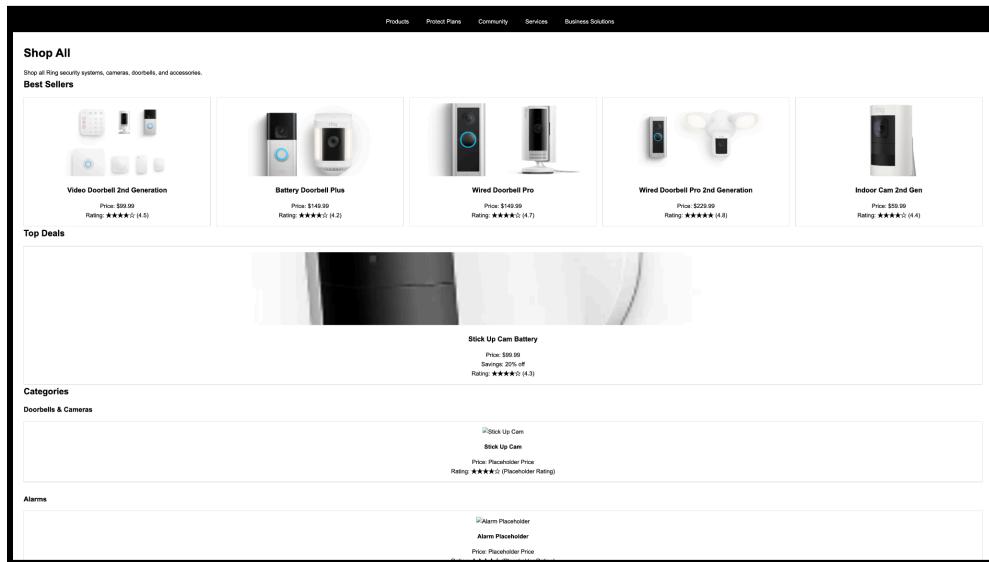
- Choice architecture:  
Structuring the presentation of options to influence decisions via defaults, sorting, filtering, and grouping. Here we collapse and curate the choices to reduce overload.
- Information architecture:  
Designing the display of information to make key details salient and easy to process. Adding prices and ratings on the main page applies this.
- Social proof:  
Leveraging the influence of the crowd to guide individual decisions. Expanding the Best Sellers section and adding reviews taps into this principle.

- Dual process theory:

Designing for both the deliberative System 2 thought process and the intuitive System 1 process. Clear categories aid deliberative comparisons while Best Seller and Deal tags provide System 1 shortcuts.

## Proposed mockup for product page:

The mockups aren't fully complete but it's a proof of concept that's why it may look a little bit incomplete but I just wanted to conceptualize what I envision an intuitive product page should look like with social proof and some level of sorting



Save big on multipacks to stay connected all around home. [Shop Now](#)

ring Products Protect Plans Community Services Business Solutions Log in Search Help Cart

## Never miss a victory.

Our top picks help you catch every moment.

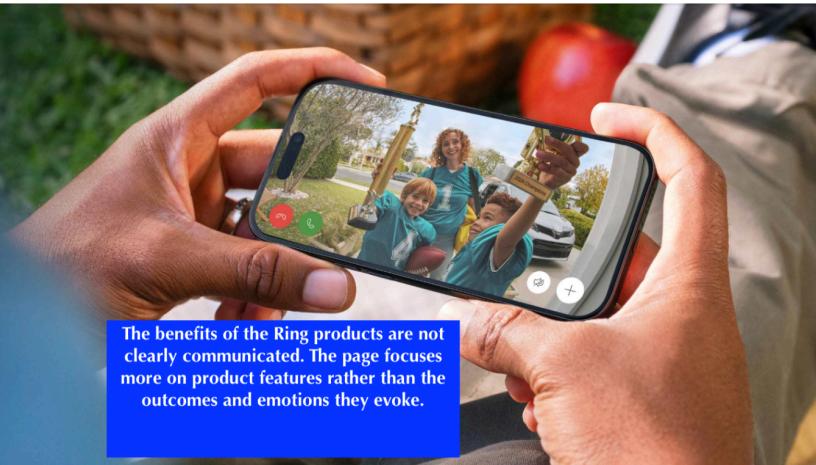
[Shop Now](#)

The page lacks clear pricing information for the products featured. Without anchoring the user to a reference price point, it becomes difficult for them to assess the value and make a purchase decision.

The benefits of the Ring products are not clearly communicated. The page focuses more on product features rather than the outcomes and emotions they evoke.

**Having too many choices can lead to decision paralysis and reduce conversion rates.**

**Text**



**Best Sellers**  
Bring home Ring icons and fan favorites.

[Shop Now](#)

While the page mentions "Best Sellers," there is no evidence or social proof to support why these products are popular or highly rated.

**Starter Kits**  
New to Ring? Browse our curated bundles.

[Shop Now](#)

**Ring Protect**  
Save videos, see what you missed, and more.

[Learn More](#)

