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# Beyond the Pink Tax: Gender-Based Pricing and Differentiation of Personal Care Products

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## Abstract

Previous research has established a pricing disparity of consumer goods and services by gender such that women pay more for the same products and services than men, the so-called pink tax. This study expands this research by examining whether these price disparities persist across a wider range of personal care products including lotions, deodorants, shaving gels/creams, razors, razor cartridges, body sprays, bar soaps, liquid soaps, and shampoos. Using the largest sample of these products to date, we examined over 3000 products to test gendered pricing across these products. Our findings suggest that gender-pricing is not pervasive across products or consistently punitive toward women. Women pay more for deodorants/antiperspirants and lotions than men, while men tend to pay more for shaving creams/gels than women. Our analysis reveals another, perhaps more insidious, process at work however: the proliferation of gender differentiation for products that makes price-comparisons for the average consumer difficult. Both gender differentiation and the pink tax are founded on essentialist thinking about gender, and further reify gender structures and inequality in society.

**Keywords** Pink tax · Gender branding · Gender discrimination · Gender differentiation

## Introduction

Extensive research has shown that significant and persistent pay gaps exist on the basis of gender, race and ethnicity. Data from the U.S. Department of Labor show that white women earned 82% percent of what white men earned in the last quarter of 2020. People of color (with the exception of Asians) earn less than

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whites, and women of color are especially disadvantaged. For example, Black women earned 70% and Hispanic/Latina women 64% of what white men earned in 2020 [27]. While these wage and salary discrepancies have been well-documented, other, more subtle ways in which women are financially burdened remain less understood. One such practice is known as the “pink tax,” or the practice of retailers and businesses charging women customers more for similar products and services compared to men customers [7, 9, 18]. Such gendered price disparities have been found for a variety of products and services, with personal care products such as deodorants and razors among those with the largest price disparities [28]. Given that personal care products are purchased more often than many other consumer goods, the pink tax is believed to result in significant financial burden for women over time. This may be especially true for individuals who work in service, sales or offices—jobs predominantly occupied by women and people of color—who may be required to use such products in order to adhere to gendered appearance and cleanliness norms [10, 28].

There have been some legislative efforts to address the pink tax. For instance, New York State enacted the first prohibition on the pink tax, which went into effect in September 2020 [11], and California has introduced similar legislation. While these laws are important and likely to address the most blatant instances of the pink tax, they are limited in scope and effectiveness. The New York law, for example, allows retailers to charge more for similar items if the cost, time, labor, materials, difficulty in manufacturing, or “any other gender-neutral reason for having increased the cost of such goods or services” can be demonstrated [11]. In practice, manufacturers and retailers could construct or claim differences exist by making minor changes in a product or advertising, and therefore charge more for essentially identical items.

Previous research documenting the pink tax has analyzed only how gender affects pricing, not how “difference” is constructed by these products. Yet, as our research reveals, there are often constructed differences that are themselves gendered that obscure gendered price discrepancies. This study is the first to examine not just gendered price discrepancies in personal care products but gendered factors that can make obscure gendered price discrepancies. As legislative efforts to address the pink tax are enacted or attempts are made to enforce such laws, it is critical to go beyond the pink tax to understand how products are further differentiated on the basis of gender, and therefore able to avoid the pink tax ban.

This study first analyzes whether the pink tax exists across a wide variety of personal care products including bar soaps, liquid soaps, lotions, deodorants, shaving gels/creams, razors, cartridges, body sprays and shampoos/conditioners. We then attempt to tease out factors beyond gender that may help explain price differences, including distinguishing designer brands from mass-marketed ones, enhanced products such as multi-purpose products, and medicated or clinical-strength products, and explore how such factors are themselves gendered. By highlighting gendered product differentiation, our study goes beyond the pink tax to reveal other, perhaps more insidious, ways that gender shapes consumers’ choices and pocketbooks, and ultimately contributes to and reinforces gender inequality in society.

## Literature Review

The so-called pink tax refers to the practice of charging more for similar products marketed to women or girls than those marketed to men or boys. Such gendered price disparities have been found for a variety of products and services, including mortgages, clothing, dry cleaning, toys, haircuts, pens and wireless mice [7, 9, 18].<sup>1</sup> One report found that on eBay, products offered by women command lower prices than when sold by men, even when controlling for sellers' reputations [15]. The California Department of Consumer Affairs estimated that a woman pays, in effect, a gender tax of \$1351 per year [6]; in 2021 dollars, this would be approximately \$2294.

Numerous studies have found that women typically pay more than men for various products and services. Duesterhaus, et al. [9] sampled personal-care products (deodorant, shaving gel/cream, razors, and scented body sprays) sold online at four major retailers (Target, Wal-Mart, CVS, and Walgreens).<sup>2</sup> Of the 538 products analyzed, they found that women paid significantly more per ounce for deodorants, and more for razors and body sprays, although the latter were not significantly different when price per item/ounce was calculated.

More recently, the New York City Department of Consumer Affairs (DCA) conducted an extensive study of 35 different types of products from 24 stores to compare prices of similar products marketed to women and men, ranging from children's toys to adult diapers [7]. Thus, the study "mirrors an average consumer lifecycle, from baby products to products for seniors, providing a glimpse into the experiences of consumers of all ages" [7, p. 17]. The products analyzed were similar in branding, ingredients, construction, textile, appearance and marketing. Similarity is key here. de Blasio and Menin [7] noted that women's products often have prominent claims, such as moisturizing strips on women's razors, features that men's razors also have (e.g., aloe moisturizing strips), yet cost more. Thus, products may not appear similar but in fact are. Across all products, women paid more 42% of the time, whereas men paid more 18% of the time (40% were equal). The greatest discrepancy was for personal care products such as shampoos, lotions, and razors, where women's products cost more 56% of the time compared to men's, and on average, women's products cost 13% more than those for men. Only one product—shaving cream—marketed heavily to men, cost more (4% more) for men than for women. The largest discrepancy was for hair care products, where women paid nearly 48% more than men. In addition, men's hair care products are typically sold as a "2-in-1" product (e.g., shampoo and conditioner) and separately for women, which means women pay for two products rather than one. It was also the case that quantities sold to men and

<sup>1</sup> The pink tax is distinct from the tampon-tax, whereby sales tax is applied to feminine hygiene items (currently 30 states tax menstrual products) in that the pink tax applies to similar or identical items and services that are utilized by men and women but priced differently [24].

<sup>2</sup> Duesterhaus et al. [9] also sampled hair salons and dry-cleaners in Central Florida and found that women paid more for certain dry-cleaning services and haircuts.

women differed. For instance, a typical deodorant stick marketed to women contained 2.6 oz and that sold to men contained 2.7 oz.

In 2018, the United States Government Accountability Office [29] used Nielsen Company data on retail prices paid at the register to document gender-based price differences for a variety of goods and services. The GAO analyzed 10 products: underarm deodorants, body deodorants, shaving cream, shaving gel, disposable razors, non-disposable razors, razor blades, designer perfume, mass-market perfume, and mass-market body sprays. Because products are often sold in different quantities, the researchers compared average item price and average price per ounce or count.<sup>3</sup> In all, five were priced higher for women than for men (underarm deodorants, body deodorants, shaving creams, designer perfume, body sprays), two (shaving gel and non-disposable razors) were more expensive for men, one (razor blades) cost more for women per count, but there was no price difference by average item, and two (disposable razors and mass-market perfumes) showed no statistical difference in price. The researchers concluded that “the target gender for a product is a significant factor contributing to price differences identified” [29, p. i] and that the cost to a consumer can be significant “even when prices for products within that category are low” [29, p. 1]. de Blasio and Menin [7, p. 11] also note that because personal care products are purchased more often than many other consumer goods, the price difference “translates into a significant financial burden for women over the course of a lifetime.”

While these important studies have documented various aspects of the pink tax, there are limitations. For instance, Duesterhaus, et al. [9] examined a limited number (4) of personal care products so it is unclear whether price discrepancies exist for a wider range of products. The de Blasio and Menin [7] study did not calculate price per ounce or per item so it is possible that the discrepancy in costs between men’s and women’s products differs (more or less) from simple percent differences. Further, because they were closely matching products, the overall sample size is relatively small ( $N=122$  personal care products) and therefore does not account for price discrepancies among a wide range of products (especially high-end products) that may be more heavily marketed to women. While the sample size and range of products analyzed in the GAO study [29] are larger, their findings are based on products sold rather than the nature of products available to consumers and exclude certain common personal care items such as soaps, lotions and shampoos.

Studies on the pink tax are also limited in their ability to explain price discrepancies. While the existence of gender-pricing has been documented, it is impossible to determine whether price differences are due to gender bias or market and production factors [29]. There are various explanations for why women’s products may be priced higher than men’s. One explanation is price discrimination—if women are willing to pay more, they are likely to be charged more, even though the products are essentially identical and unrelated to manufacturing costs [19].

<sup>3</sup> According to the GAO report, “the average item price is the total dollar sales for a product category divided by the total number of items sold for that category.... [whereas] [t]he average price per ounce or count is the item price divided by the quantity of product” [29, p. 10].

Relatedly, gender price discrepancies may result from product differentiation that is intended to make a product more attractive to a particular audience, leading to higher costs for that audience [18, 29]. The GAO [29] explains how such price discrimination works:

Based on the differentiated products, consumers self-select into different groups according to their preferences and what they are willing to pay.... For example, some consumer goods have different versions of what is essentially the same product—except for differences in packaging or features, such as scent—with one version intended for women and another version intended for men. The two products may be priced differently because the firm expects that one gender will be willing to pay more for the product than the other based on preference for certain product attributes [pp. 5–6].

Alternatively, some products may be more costly to manufacture or face higher tariffs or advertising costs [18]. Without corporate-level data on production and advertising costs, it is not possible to determine whether or to what degree price discrepancies are due to such factors but there are reasons to believe these are negligible. Maloney [18] analyzed virtually identical products that vary only by color of the packaging and found that those marketed to women cost more than that marketed to men. de Blasio and Menin [7] also suggest that the major cost is the research and development that go into product creation, not ingredients or packaging. And although higher tariffs are applied to women’s clothing, this does not appear to be the case for imported personal care products. Finally, the raw materials used in women’s products may actually be less, thanks to the “shrink it and pink it” marketing strategy, which would presumably reduce production costs. Whether the pink tax is the result of price discrimination, manufacturing costs, or gender discrimination, the reality is that for women consumers, the economic impacts can be significant and compound the costs of being a woman in society [9].

While several states and municipalities have enacted laws banning gender-price disparities for services such as haircuts and dry cleaning, until 2020, no laws prohibited charging one gender more for personal care products [13, 29]. New York State enacted the first prohibition on the pink tax, which went into effect September 30, 2020 [11]. The law “mandates that any individual or entity, including retailers, suppliers, manufacturers or distributors, are prohibited from charging a price for two ‘substantially similar’ goods or services, if the goods or services are priced differently based on the gender for whom the goods or services are marketed” [11]. In California, legislators have introduced a bill (SB 873) that bans charging customers more on the basis of gender for products. One of the authors of the bill, Congresswoman Jackie Speier, has introduced H.R. 2048, the Pink Tax Repeal Act, a federal law that would prohibit “product manufacturers or service providers from selling substantially similar products at different prices based on the gender of the intended purchaser. If, for example, the only difference between two products is the color, they are substantially similar” (at the time of this writing, the bill was in Committee) [12].

While these laws (if passed) are likely to alter how products are marketed and sold, there are loopholes. In New York state, there is a provision in the 2020 law that

states that retailers and providers can charge more if the price difference is based upon any of the following:

- The amount of time it took to manufacture such goods or provide such services
- The difficulty in manufacturing such goods and offering such services
- The cost incurred in manufacturing such goods or offering such services
- The labor used in manufacturing such goods or providing such services
- The materials used in manufacturing such goods or providing such services
- Any other gender-neutral reason for having increased the cost of such goods or services [11].

In effect, it has become more difficult to impose a pink tax but not impossible if manufacturers make it appear that products are substantially different by emphasizing differences. McGinley [21] argues that product design is the key factor in constructing such differences. The packaging color, shape, size, fonts, imagery, wording and descriptions, models depicted, and fragrance are all used to make a product appear different [18, 21]. These differences are built into product design by manufacturers, then reinforced by retailers' own descriptions and algorithms for online shoppers, and by store displays or layouts which often physically segregate men's and women's products [7].

Jacobsen [13] suggests that the prospects of legal remedies for the pink tax are dim, leading some states to create educational campaigns designed to inform consumers about the price discrepancies. In New York, for example, consumers are encouraged to join the DCA's social media campaign by sharing examples of fair and gendered pricing with the hashtag #genderpricing [7]. Yet, as Jacobsen [13, p. 253] notes, "educating the public about a consumer problem without providing real, tangible solutions to it is no remedy at all." Alternatively, retailers could address the discrepancy, and at least one has. The CEO of Boxed, an online retailer, announced that the company changed their pricing so that consumers pay the same price for the same products, regardless of gender, noting "I am proud that we have become the first retailer, online or off, to take a major stand against unfair pricing for women, but I sincerely hope we are not the last" [4].

Informing consumers about the price discrepancies, however, is a hurdle that cannot alone combat the gender differentiation that persists and perpetuates a more burdensome and costly consumer experience for women. The gendered social norms and the various constraints that serve to maintain those norms are embedded in consumer habits [8, 16]. For example, women, more than men, are expected to participate in "body modification practices" [16], such as eliminating sweat and body odor, removing hair from multiple parts of their body, enhancing their appearance with make-up, or undergoing plastic surgery. Indeed, Dellinger and Williams [8] suggest that refusal to adhere to these social norms within the workplace can have costly consequences, including lack of credibility.

According to Luciano [17], men also are no strangers to the pressures of keeping up appearances and historically have had to present and maintain a high degree of masculinity. The behaviors representing such masculinity, such as hard labor and providing for the family (to name a few) have shifted over time depending

on historical and cultural circumstances. Luciano points to a shift in mid-century whereby self-fulfillment and self-image have increasingly been prioritized. As a result, and with the help of manufacturers and marketers taking advantage of this consumer driven culture [23], “American men have been transformed into body-conscious consumers of revealing fashions, seductive perfumes, and the services of hairstylists, personal trainers, and plastic surgeons” [17, p. 12]. Just as women are subject to the gendered expectations of femininity, men are subject to gendered expectations of masculinity which helps explain the rise of “masculine” products on the market now, such as *Dove for Men*<sup>TM</sup>. Despite these shifts, hegemonic masculinity persists in maintaining men’s privileged position [23] and women continue to bear the brunt of financial and cultural costs of gender [9, 29].

In this study, we analyze whether the pink tax continues to exist, despite the legal and educational efforts. Our study addresses limitations of previous work (i.e., small sample sizes, limited number of products analyzed, and sold products rather than availability). We analyze a large sample (N = 3282) and expand the types of personal care products analyzed to include bar soaps, liquid soaps, shampoos, and lotions as well as deodorants, shaving gels/creams, razors, cartridges, and body sprays. More importantly, we take into consideration other factors, such as multi-purpose or medicated items, that may help explain price differences to give a more accurate account of price disparities. Our sample allows us to explore not only price discrepancies but also the extent to which differentiation has come to characterize the marketplace.

## Methods

### Sample

Our sample consists of everyday, staple hygiene products used by both genders including razors, razor cartridges, lotion, deodorant, shaving gels/cream, body spray, body wash, bar soap, and shampoo. Rather than sampling for specific brands or products, data were collected from four major retailers—Wal-Mart, Target, CVS and Walgreens—using the general product category (e.g., lotion) and then filtering the search results by gender. Most stores allowed product searches to be filtered by gender but when the filter was not available, keywords such as “women’s lotion” or “men’s razors” were used to filter the search results and obtain products marketed to a particular gender. Each coder checked the product description to ensure there was a clear gender marker. As an additional “gender filter,” the products in the search results were also cross-checked against the products in the “gender neutral” filter category and if a product listed in the specific gender search results also appeared in the “gender neutral” search results and was not clearly gendered, the product was removed from our sample.

Our sample included products only sold and fulfilled by the retailer. Excluded products were those sold in travel sizes, bulk sizes, gift sets, or multi-packs unless the product was not sold individually (two exceptions were razors and cartridges, which are predominantly sold in multi-packs). The final sample consists of products

that were clearly marked as intended for men or women and were close to a “standard” size for a given product category.

All data were obtained from retailers’ websites, searching incognito. Pricing online may be different than in-store pricing but for the purpose of this study we believe online pricing is appropriate since our focus is on the pricing of gendered products not limited to location. In addition, these data were collected in the summer and fall of 2020, during a global pandemic, when more people may have found themselves purchasing items online and subject to these prices.

The final sample consists of nine common personal care items: lotions (N=327), deodorants/antiperspirants (N=1054), shaving gels/creams (N=236), body sprays (N=334), razors (N=309), cartridges (N=142), body washes (N=164), bar soaps (N=143) and shampoos (N=573). The final sample included products from 116 distinct brands across all product types. About 31 percent were coded from Wal-Mart, 26 percent from Walgreens, 23 percent from Target and 20 percent from CVS.

### Coding and Variables

Each product was coded for gender (1 = women; 0 = men), retailer (i.e., Target, Wal-Mart, CVS, Walgreens), product type (e.g., lotions, deodorants, shaving gels, etc.), brand name, product name, count (single items, twin-packs, etc.), price (original price, not sale prices), number of ounces in the product, and up to three qualities that may affect pricing. These special qualities varied depending on the product type, but all products were coded for whether it was a designer brand, where “designer” was defined as having the name of a designer or celebrity (e.g., *Elizabeth Arden Red Door Deodorant Cream Stick for Women*<sup>TM</sup>, *Donna Karen Cashmere Mist Body Lotion*<sup>TM</sup>, or *Marc Anthony True Professional Curl Shampoo Coconut Cream*<sup>TM</sup>). Other qualities included whether a product was marketed as a multi-purpose product (e.g., shampoo or body wash marketed as a 2-in-1); whether it was marketed as “medicated,” “clinical strength” or “natural”; and/or contained any other “enhanced” quality (e.g., perfumed or anti-aging ingredients) that could be used to justify a higher price.

In addition, we calculated “total ounces” for liquid-based products by multiplying the number of ounces in the product by the total count to determine the total number of ounces accounted for in the price of the product. The price of the product was then divided by the total number of ounces to create the variable “price per ounce.” For razors and razor cartridges, we made a similar calculation (i.e., multiplied number of items by total price) to create the variable “price per item.”

### Analysis

We performed a series of independent samples t-tests to analyze price disparities by gender, including total price of the product by gender, the volume of the product by gender, and the price per ounce/item of the product by gender. Our analysis focuses on the most standardized measure—price per ounce or item—to provide the most accurate account of price disparities. We use Pearson Chi-square tests,

**Table 1** Average price, volume and price per ounce/per item of personal care products by gender (standard deviation)

Product	<i>N</i>	Price in US \$	Volume per item	Price per oz
<b>Lotions</b>				
Women	273	18.46 (16.48)*	9.25 (5.76)*	2.97 (3.46)**
Men	54	10.14 (8.38)	12.53 (6.67)	1.86 (4.09)
<b>Deodorants</b>				
Women	435	7.30 (4.05)	2.71 (0.81)***	2.86 (2.30)***
Men	619	7.16 (4.79)	3.05 (1.03)	2.39 (2.12)
<b>Shaving gels</b>				
Women	66	4.94 (3.16)	6.74 (1.99)	0.89 (1.30)
Men	170	8.95 (8.95)***	6.45 (2.33)	1.66 (2.12)**
<b>Body sprays</b>				
Women	189	8.75 (3.65)*	6.28 (2.89)***	1.56 (1.04)
Men	145	8.04 (4.09)	5.12 (1.64)	1.56 (0.75)
<b>Razors</b>				
Women	145	7.99 (3.69)*	3.97 <sup>a</sup> (3.97)	3.48 (3.91)
Men	164	9.04 (7.37)	5.78 (5.30)***	4.10 (7.65)
<b>Cartridges</b>				
Women	75	11.35 (3.48)	3.09 <sup>a</sup> (1.23)	4.00 (1.40)
Men	67	12.29 (6.65)	3.75 (2.50)*	3.79 (1.71)
<b>Shampoos</b>				
Women	410	9.85 (7.34)	13.80 (6.43)**	0.86 (0.81)
Men	163	10.84 (8.13)	15.70 (7.55)	0.90 (0.90)
<b>Body Wash</b>				
Women	98	6.67 (3.53)	19.49(6.89)	0.39 (0.47)
Men	66	6.64 (2.96)	18.87 (5.47)	0.38 (0.35)
<b>Bar Soap</b>				
Women	106	7.35 (6.95)	4.30 (1.36)**	0.66 (0.76)
Men	37	8.70 (9.07)	5.06 (2.01)	0.75 (0.89)

Main cells

\* $p < .10$ ; \*\* $p < .05$ ; \*\*\* $p < .001$ <sup>a</sup>Denotes average number of razors in package (count vs. ounces)

independent-sample t-tests and multiple regression analyses to determine whether price differences exist by product, and after controlling for special qualities.

## Findings

### Gender Pricing

In this study, we sought to determine whether the pink tax applies to a wide variety of personal care products. We found some evidence that it does, but with important caveats. Table 1, which presents the average price per product, average volume per

item, and price per ounce (or per item for razors and cartridges) by gender shows that for four products there are significant differences in average price, eight products show differences in volume/amount, but only three show gender differences in pricing per ounce and one of those costs more for men than women. Here we focus on the standardized measure of price-difference: price per ounce or per item.

The three products for which there are significant differences in pricing per ounce occurs are lotions, deodorants/antiperspirants and shaving gels/cream. Women pay \$1.11 more per ounce of lotion than men ( $t=2.104$ ,  $p<0.05$ ). For the deodorants/antiperspirants, women pay a significantly higher amount per ounce of deodorant than men ( $t=3.41$ ,  $p<0.001$ ). Women's deodorants have a mean price per ounce of \$2.86 compared to men's at \$2.39. For shaving gels/creams, men pay an average of \$1.66 per ounce of shaving gel/cream compared to \$0.89 per ounce for women's shaving gels/creams ( $t=-3.379$ ,  $p<0.001$ ).

There are multiple factors beyond gender-marketing for some products that may explain pricing. The majority of personal care products (78%) do not have any special qualities, but we found hundreds of "designer" brand or luxury products, as well as medicated, "natural," and 2 (or 3)-in-1 products, all of which may affect price. In our sample, 8% were designer/luxury, 13% were multi-purpose or "natural," and 3% were medicated or clinical strength. There were too few special qualities associated with many of the products to conduct multivariate analyses, so we focus this analysis on two product types where such analyses are appropriate, deodorants/antiperspirants and shampoos.

We sought to determine whether gender pricing occurred after controlling for these special qualities by regressing price per ounce/item on gender and various qualities. These analyses revealed that there is a significant difference in the pricing of deodorants/antiperspirants even after controlling for special qualities (likewise, designer and medicated products contribute significantly to the cost of deodorants) (see Table 2). These factors—gender, designer brand, deodorant-only and medicated/clinical strength—accounts for more than half the variance in price.

There were too few men's lotions with special qualities to run a regression analysis testing for the effect of price while controlling for qualities, but one might expect such qualities to affect pricing. For example, women's lotions are likely to contain perfume, which might explain the higher cost of women's lotions. We investigated this possibility by conducting independent t-tests to analyze "specialty" lotions (i.e., those that are designer brand or contain perfume/cologne, or both) (targeted to men or women) separately from non-specialty lotions. The results indicate that women's lotions cost more than men's, regardless of whether they contain perfume/cologne or are designer brand. For non-specialty lotions, women's lotions cost \$1.87 per ounce compared to \$1.08 per ounce for men's lotions ( $t=1.95$ ,  $p<0.05$ ). For specialty lotions, women's lotions cost \$2.91 per ounce and men's lotions cost \$1.86 per ounce ( $t=1.91$ ,  $p<0.05$ ). In addition, women's lotions are significantly smaller than men's even after removing the high-end (designer, perfumed) products. The average size women's lotion is 9.97 oz compared to 12.68 for men's ( $t=-2.652$ ,  $p<0.01$ ). In short, women pay more for lotions regardless of whether they are designer-brand or perfumed.

**Table 2** Multiple regression results showing gender pricing of deodorants, controlling for special qualities (standard error)

Independent variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Constant	2.38 (.088)	2.017 (.07)	1.9 (.097)	2.276 (.083)	1.676 (.092)	1.727 (.07)
Gender (1 = Women, 0 = Men)	.475*** (.137)	.643*** (.107)	.644*** (.134)	.205 (.131)	.564*** (.124)	.421*** (.096)
Designer (1 = Yes, 0 = No)		6.704*** (.255)				6.352*** (.236)
Deodorant-only (1 = Yes, 0 = No)			1.335*** (.150)			.607*** (.113)
Medicated (1 = Yes, 0 = No)				2.954*** (.244)		3.173*** (.179)
Any Extra Qualities (1 = Yes, 0 = No)					1.987*** (.129)	
R <sup>2</sup>	.011	.403	.08	.132	.192	.54
Adjusted R <sup>2</sup>	.010	.402	.08	.130	.191	.54
N	1054	1054	1053	1054	1054	1054

\*\*\**p* < .001, \* *p* < .10

**Table 3** Multiple regression results showing gender pricing of shampoos, controlling for 2-in-1 or 3-in-1 products

Independent variables	Model 1	Model 2
Constant	.901 (.066)	1.192 (.088)
Gender (1 = Women, 0 = Men)	– .044 (.078)	– .306*** (.094)
Multi-purpose (2 or 3 in 1) (1 = Yes, 0 = No)		– .526*** (.110)
R <sup>2</sup>	.001	.039
Adjusted R <sup>2</sup>	– .001	.036
N	573	573

\*\*\* $p < .001$ 

The analyses revealed interesting findings with respect to shampoos. As noted earlier, men’s shampoos contain significantly more ounces than women’s shampoos, yet the price per ounce was not significantly different by gender. However, shampoos for men are more likely to be marketed as multipurpose products compared to women’s shampoos. For instance, 54.2 percent ( $N=168$ ) of all men’s shampoos were marketed as multi-purpose such as “2-in-1 shampoo and conditioner,” “2-in-1 shampoo and body wash,” or “3-in-1 shampoo, conditioner, and body wash,” whereas only 4 percent ( $N=421$ ) of women’s shampoos had such claims. A Pearson Chi-square test found that these differences in the multi-purpose products to be significant ( $\chi^2=201.5$ ,  $p < 0.001$ ) where men are significantly more likely to be marketed the multi-purpose products compared to women. Table 3 shows results for gender pricing when controlling for 2-in-1 or 3-in-1 products. The price of shampoos is higher for men than women when controlling for 2-in-1 or 3-in-1 products (see Table 3). In fact, gender explains no variation in pricing until one takes into account more expensive multi-purpose shampoos. (There are too few designer or medicated shampoos in our sample to run multivariate analyses.)

There are too few cases of shaving gels/creams with special qualities to run a multiple regression analysis, but it appears that higher prices within the category of men’s shaving gels/creams is explained in part by designer labels. For example, 6 oz of *Jack Black Supreme Cream Triple Cushion Shave Lather*<sup>TM</sup> costs \$19 at Wal-Mart, or \$3.20 per ounce, whereas 6 oz of *Gillette ProGlide Alpine Clean Sensitive Shave Gel*<sup>TM</sup> cost \$4.22 at Wal-Mart, or \$0.70 per ounce. It also appears that the designer brands marketed to women cost more than the same branded products marketed to men. For example, *The Art of Shaving Lavender Shaving Cream*<sup>TM</sup> for women sells for \$9.98 per ounce (2.5 oz at \$24.94). *The Art of Shaving Men’s Lavender Shaving Cream*<sup>TM</sup> sells for \$5.00 per ounce (5 oz at \$24.99). Given the limited number of designer shaving gels/creams, these conclusions are tentative but suggestive nonetheless.

### Beyond Gender Pricing: Gender Differentiation

Of the 3282 personal care products in our sample, 1797 (54.8%) were marketed specifically to women, and 1485 (45.2%) were marketed to men, a significant difference ( $\chi^2=351.56$ ,  $p < 0.001$ ). As shown in Table 4, there are significantly more lotions,

**Table 4** Distribution of product types by gender

Products	Women's	Men's	Total
Lotions	273 (83.5%)	54 (16.5%)	327
Deodorants	435 (41.3%)	619 (58.7%)	1072
Body Sprays	189 (56.6%)	145 (43.4%)	334
Shaving Gels	66 (28.0%)	170 (72.0%)	236
Razors	145 (46.9%)	164 (53.1%)	309
Cartridges	75 (52.8%)	67 (47.2%)	142
Shampoos	410 (71.6%)	163 (28.4%)	573
Body Wash	98 (59.8%)	66 (40.2%)	164
Bar Soap	106 (74.1%)	37 (25.9%)	143
Totals	1797 (54.8%)	1485 (45.2%)	3282

shampoos, body washes and bar soaps marketed to women. Specifically, 83% of the 327 lotions, 71% of the 573 shampoos, and 74% of the 143 bar soaps were marketed to women. Only one product—shaving gels/creams—is marketed considerably more often to men than to women (72%). Other products (deodorants, body sprays, body washes, razors, and cartridges) had distributions closer to 60/40 or 50/50 split for men and women.

Beyond the basic distribution in number of products, manufacturers further differentiate products in various ways, and these practices are themselves shaped by gender. For example, there were 84 lotion products that were coded as designer brands, of which 77 were marketed to women (see Table 5). We also observed that only lotions marketed to women had added perfumes to the lotions, and often had names such as *Darling*<sup>TM</sup> (by Kylie Minogue), *Live in Love*<sup>TM</sup> (by Oscar de la Renta), *Ariana Grande's Sweet Like Candy Body Mist*<sup>TM</sup> and *Secret's Fresh Antiperspirant and Deodorant Clear Gel Paris Rose*<sup>TM</sup>, further designating them as women's products through scent and labeling. In addition, only six lotions in our sample were coded as “medicated” and of these, only one was marketed for men and it claimed to help with psoriasis, a skin condition. In contrast, the medicated lotions for women did not focus on a specific skin condition but more so on the improvement of the appearance of the skin with keywords such as “firming,” “hair inhibiting,” or “stem cell neck lift body lotion.”

Designer brands for body sprays marketed to men and women were more equally distributed with women having slightly more (57%) designer brands than men (42%) ( $N = 83$ ). There were only 15 designer shampoos in our sample, but 10 of them were marketed to women. Conversely, we found that out of the 30 designer brand shaving gels/creams, 29 were marketed towards men. As with lotions and other products discussed earlier, these designer products are gendered both in terms of the number of these products offered and the labelling.

Deodorants-only (not antiperspirants) were disproportionately available to men (70.4%) compared to women (29.6%) ( $\chi^2 = 21.25$ ,  $p < 0.001$ ). Deodorants were also a category where we noted distinct differences in “medicated” products. In the case of deodorants, “medicated” products were those that highlighted their

**Table 5** Distribution of designer vs. non-designer products by gender

Products	Men	Women	Total
All products			
Designer	109 (41.8%)	152 (57.5%)	261 (100%)
Non-Designer	1375(45.6%)	1643 (54.4%)	3021 (100%)
Specific products			
Lotions**			
Designer	5 (6.0%)	79 (94.0%)	84 (100%)
Non-Designer	48 (20.0%)	192 (80.0%)	240 (100%)
Deodorants*			
Designer	34 (72.3%)	13 (27.7%)	47 (100%)
Non-Designer	585 (58.1%)	422 (41.9%)	1007 (100%)
Shaving Gels***			
Designer	29 (96.7%)	1 (3.3%)	30 (100%)
Non-Designer	147 (68.4%)	65 (31.6%)	206 (100%)
Body sprays			
Designer	34 (42.5%)	46 (57.5%)	80 (100%)
Non-designer	111 (43.7%)	143 (56.3%)	254 (100%)
Razors			
Designer	0	0	0
Non-designer	164 (53.1%)	145 (46.9%)	309 (100%)
Cartridges			
Designer	0	0	0
Non-designer	67 (47.2%)	75 (52.8%)	142 (100%)
Shampoos			
Designer	5 (33.3%)	10 (66.7%)	15 (100%)
Non-designer	158 (28.3%)	400 (71.7%)	558 (100%)
Body Wash			
Designer	0	1 (100%)	1 (100%)
Non-designer	66 (40.5%)	97 (59.5%)	163 (100%)
Bar soap			
Designer	2 (50%)	2 (50%)	4 (100%)
Non-designer	35 (25.2%)	104 (74.8%)	139 (100%)

Pearson Chi-Square: \*\*\*  $p < .001$ , \*\*  $p < .05$ , \*  $p < .10$

“clinical strength” formulas. An analysis of these products by gender showed that there were more “clinical strength” products available for women than men, where 71% of the clinical strength deodorants were marketed to women compared to 29% to men ( $n = 79$ ;  $\chi^2 = 30.90$ ,  $p < 0.001$ ).

Finally, it should be noted that differentiation occurs in another sense. Brands make fine distinctions between similar products, creating a slew of products from which to choose. For example, there are 143 *Secret*<sup>TM</sup> brand deodorants in our sample, all of which are marketed to women, and the distinctions among these are

often minimal. Here is a small sampling of *Secret's*<sup>TM</sup> Clinical Strength Antiperspirant & Deodorants marketed to women:

- *Secret Clinical Strength Sport Fresh Soft Solid Antiperspirant & Deodorant*<sup>TM</sup>
- *Secret Clinical Strength Sensitive Unscented Soft Solid Antiperspirant & Deodorant*<sup>TM</sup>
- *Secret Clinical Strength Light and Fresh Soft Solid Antiperspirant & Deodorant*<sup>TM</sup>
- *Secret Clinical Strength Invisible Solid Clean Antiperspirant & Deodorant for Women Lavender*<sup>TM</sup>
- *Secret Clinical Strength Antiperspirant & Deodorant Soft Solid Stress Response*<sup>TM</sup>

The same is true for men's products. For example, there are 75 *Degree*<sup>TM</sup> brand deodorants marketed to men in our sample (compared to 112 *Degree*<sup>TM</sup> products marketed to women), with just minute distinctions among them. Even high-priced, designer products provide multiple options. For example, Elizabeth Arden lotions include *5<sup>th</sup> Avenue Body Lotion*<sup>TM</sup>, *Green Tea Refreshing Body Lotion*<sup>TM</sup>, *Green Tea Scent Honey Drops Perfumed Body Lotion Cream for Women*<sup>TM</sup>, *Red Door Body Lotion*<sup>TM</sup>, *Red Door Perfumed Body Lotion*<sup>TM</sup>, and *Sunflowers Women's Body Lotion*<sup>TM</sup>. Although a qualitative analysis of labels is beyond the scope of this study, it is noteworthy that the names of products are often gendered as well (e.g., *Soap & Glory's Sugar Crush Body Lotion*<sup>TM</sup> and *Cooling All Girls Crackling Moisture Mousse*<sup>TM</sup>, or *AXE*<sup>TM</sup> deodorants for men with names such as *Charge Up* and *Phoenix*).

## Discussion

In terms of the persistence of the pink tax on personal care products, there is good news. While there was some evidence of gender pricing among the nine products we analyzed, it was not consistently the case that women paid more than men, or that price differences persisted after controlling for factors that could affect prices. Our findings showed significant pricing differences by gender for deodorants/antiperspirants, lotions, and shaving gels/creams, where women pay more per ounce for deodorants/antiperspirants and lotions, and men pay more per ounce for the latter.

These findings are consistent with previous studies with respect to certain items. For example, studies have found that deodorants cost more for women than for men [9, 29]. In our study, the deodorant pricing disparity is such that women pay \$0.47 per ounce on average than men. This discrepancy is greater than that found by Duesterhaus et al. [9] (\$0.29) which suggests that not only is this price disparity persistent but possibly increasing. Women pay more for lotions than men (\$1.11 per ounce more). deBlasio and Menin [7] also found that lotions cost more for women than men but they did not break down prices by ounce (GAO [28] and Duesterhaus, et al. [9] did not analyze lotions). We found that much of the variation in lotion prices is due to designer- or luxury-brand items that are

costly, and these are almost exclusively marketed to women. Duesterhaus et al. [9] found no difference in shaving gels/creams, and the GAO study [29] found that women paid more for shaving creams and men paid more for shaving gels. In our study, gels and creams were combined and there was a pronounced gender price disparity, with men paying significantly more for shaving gels/creams than women. Men's shaving gels/creams cost, on average, \$0.77 per ounce more than those for women.

It is noteworthy that the three products (deodorants/antiperspirants, lotions, and shaving gel/cream) that reveal significant gender-price differences are those that are arguably most obviously or visibly associated with gendered expectations. The vast majority (81%) of deodorants sold to women are also antiperspirants, not just covering up odor but also inhibiting the production of the bodily fluid that causes the odor (sweat) (by contrast, 68% of deodorants marketed to men were antiperspirants). Sweating or perspiring is not equally perceived for women and men. It is culturally accepted for men to sweat—to sweat visibly, that is, since all humans sweat. As Duesterhaus et al. [9, pp. 185–186] suggest “men's social fluids are more acceptable than women's, so that heavy sweating (and odor) may be more damaging to women's images than men's.” Furthermore, women who choose deodorants over antiperspirants still pay significantly more for deodorants (as compared to antiperspirants) than men. The fact that women are charged more for these products suggests that there is not only a price hike for women's underarm deodorant products but potentially a toxic penalty as well where women pay more than men for products that are deemed less toxic and/or more “natural.” This, in combination with the fact that there are proportionately more antiperspirants marketed to women, needs further exploration, as it could have deeper implications related to women's health.

Having “beautiful” skin is also consistent with gendered expectations for women who are expected to have soft and wrinkle-free skin. It is not uncommon for women's lotion products to emphasize anti-aging, firming, rejuvenation, or anti-cellulite properties, but such products are almost nonexistent for men. The names of products also reveal gendered differences. Women's products contain words or phrases such as “softening,” “silkening,” “delicate,” or “beautiful” while men's contain words such as “industrial strength,” “maximum hydration,” or “fast absorbing.” Women's lotions frequently are distinguished by fragrances and scents, whereas men's are not. For example, almost all of the designer lotions are for women and many contain perfumes or flowery and “sweet” scents (e.g., “sugar pink cactus and watermelon,” “pink vanilla,” “cherry blossom”). Although a qualitative analysis of product names and descriptions is beyond the scope of this study, it is clear that manufacturers have created decisively gendered lotions to appeal to different markets. In fact, men's lotions almost always are labeled “men's” or “for men”—ensuring that a seemingly feminine skin-care product—will not be mistaken for a “woman's product.”

Men paying more for shaving gels and creams reinforces the gendered expectations for men to maintain a clean-shaven face. This is one product where men may be at a disadvantage since facial hair is visible and its grooming may be a requirement for employment in some industries, which would require men to purchase razors and shaving cream on a regular basis. In contrast, women use shaving gels/creams in areas of their bodies that can be kept covered and are less obvious, so

the product is less of a necessity for women. These shaving gels/creams for men target the facial hair whereas shaving gels for women target legs (as observed in the images by the product description on the retailer's website). It appears that manufacturers take advantage of the greater need for men to use shaving gel/cream and charge more for the product, consistent with price discrimination.

Our analyses revealed other practices at work that shape the consumer experience differently for men and women. First, a significant number of shampoos (as well as body washes) for men served the purpose of at least one additional personal care product such as shampoo and conditioner in one, or shampoo and body wash, or a combination of all three or more. Through these multipurpose products, not only are men saving money but also being "practical" and "efficient," reinforcing stereotypical masculine traits. These products tend to be marketed separately for women, creating the expectation that women need multiple products, thus spending more money and time creating their gendered presentation of self and reifying the idea that women need more and must spend more to accomplish femininity. Our study only focused on the personal care products that are sold to both genders but when one considers additional products marketed exclusively to women such as creams, serums, anti-aging products, make-up, special hair products, among others, it becomes increasingly clear that the basic hygiene products carry higher costs for women in price, convenience, and time. Furthermore, women who work in the service sector, where women of color are disproportionately represented, may be forced to adhere to strict gendered appearance guidelines at work which contributes to the compounding costs of performing femininity for women [10].

Second, there is the gendering of products by use of special qualities. When a product is a "designer" or "luxury" item, it is much more likely to be marketed to women than to men, which often drives up the cost and further differentiates the product. Similarly, there are more deodorants-only marketed to men, but they are not as pronounced in their marketing as those for women. For example, many deodorants were deodorants-only but when it is only a deodorant for women, more health claims are made such as "natural ingredients," "aluminum-free," "talc free," and so on. Such health claims are prominent on women's products, which might at first glance "justify" a higher price. For example, one of the *Old Spice*<sup>TM</sup> deodorant-only products is *Old Spice High Endurance Deodorant Fresh Scent*<sup>TM</sup>. The retailer's website features the image of the front of the product where no claims are made. It is only when you turn to the image on the back of the product where one finds, "Aluminum Free deodorant" in the label. In contrast, the *Old Spice*<sup>TM</sup> sister brand, *Secret*<sup>TM</sup>, has a product name for a deodorant-only for women named *Secret Aluminum Free Deodorant, Coconut*<sup>TM</sup> and the image in the retailer's site shows the product with "Aluminum Free" on the front of the label in letters as big as the brand name. The *Old Spice*<sup>TM</sup> deodorant sells for \$4.49 for 3 oz (\$1.50 per ounce) whereas the *Secret*<sup>TM</sup> product sells for \$4.99 for 2.4 oz (\$2.08 per ounce). This trend was noticed with other deodorant brands as well.

It is not uncommon for manufacturers to bifurcate their products into distinct brands such as when Procter & Gamble offers *Old Spice*<sup>TM</sup> deodorants for men and *Secret*<sup>TM</sup> deodorants for women, or Unilever offers *Dove*<sup>TM</sup> products for women and *Axe*<sup>TM</sup> products for men [2]. When separate brands are not possible or perhaps too

costly, then creating sub-brands of successful products such as *Dove for Men*<sup>TM</sup>, *Nivea for Men*<sup>TM</sup>, or *Gillette for Women*<sup>TM</sup>, fulfills the need to reassure consumers they are not purchasing the identical product that is marketed to a different gender, thereby allowing for a successful gender performance [1, 2, 25]. When brands that are traditionally gendered expand to reach another gender, they do so by infusing their advertising with hypermasculine or hyperfeminine images and slogans so that their gender identity is preserved [2]. For example, Avery [2] highlights the cases of Gillette entering the perceived feminine category of body washes and using football imagery and the slogan “wash like a man, feel like a man,” and *Dove for Men*<sup>TM</sup> featuring men lifting weights to reassure their male consumers that their masculinity is protected using their body wash product.

Of course, physiologically speaking, there is no need to differentiate deodorants, razors, lotions, or any other personal care product by gender. Yet, companies are clearly reinforcing the idea that there is a biological need for different products. Manufacturing companies and retailers have branded certain scented products as feminine or masculine, shaping ideas about what women or men should use and smell like. Even gender-neutral scents such as citrus or lavender have been gendered. Although there are gender-neutral products on the market, there is little incentive for manufacturers to produce gender-neutral brands given the persistent gendered brand loyalties. For consumers who utilize these gender-branded products for internal and external gender affirmations of their gender identities, there may be little incentive to “shop across the aisle.” Masculine and feminine identity markers have value to the consumer, which makes gendered branding profitable. At the same time, marketers know that consumer purchasing is driven by a desire to create a favorable social image and thus, consumers are willing to pay more for products that fulfill that image [26].

Additionally, as McCracken [20, p. 74] notes, “The known properties of the culturally constituted world [such as gender] thus come to reside in the unknown properties of the consumer good and the transfer of meaning from world to good is accomplished.” Gender distinctions, including for products that have no inherent gender qualities, help to organize the “phenomenal world” [20, p. 72]. For example, women are expected to communicate their femininity through their clothing choices just as men communicate their masculinity through their clothing choices. This interpretation is consistent with our findings that women pay higher prices for deodorant and men pay higher prices for shaving creams/gels. As the lives of women have shifted more into the public sphere, such as the workplace, a degree of hygiene is expected that is indicative of femininity (not sweating) rather than masculinity (sweating). Likewise, as the consumer culture of self-fulfillment and improved self-image increases, including for men, the grooming expectations for men have shifted into a realm that has been largely occupied by women [17]. Hence the rise in products marketed to men (although the majority are marketed to women). Some argue that men have co-opted aspects of femininity to increase their visibility within the consumer culture while not risking their masculinity. According to Barber [3, p. 473], white professional males who opt to patronize a hair salon as opposed to a barber shop do “not compromise their masculinity; instead, their stylish hair care becomes an outward sign of professional status which sets them apart from white

working-class men.” The author continues, “as long as feminized beauty routines serve utilitarian purpose, and reinforce race and class privilege, they can be folded into meanings of white professional-class masculinity.” This appropriation, however, is not new, and was part of what Breazeale [5, p. 5] described when writing about the creation of *Esquire* magazine in 1933, stating that it was a “simultaneous exploitation and denial of the feminine.” While the maintenance of facial hair may not always take place at a salon or barber, the market for men’s at-home maintenance has increased. It stands to reason that an increased cost in shaving creams and gels might be a way to offset the lower cost of razors, given also that there may be decreased ability by producers to distinguish between razors marketed to women from those marketed to men.<sup>4</sup>

Finally, our study highlights the sheer number of products marketed to one gender (more commonly, to women). The fact that there are hundreds of products available in each personal care category is an indicator of the aggressive marketing to gain the consumer’s attention and create product differentiation when there is no scientific rationale for doing so. Gendering products is the easiest way to expand their product offerings and profits since it requires virtually no research and development and simply a label change in most cases, as people are already conditioned to these marked gender differentials from an early age [1, 2]. With such an expansive selection, companies offer minute differences between products that allow them to vary pricing, making it difficult for consumers to draw direct comparisons between products or be savvy to gendered pricing. This “consumer overload” is surely profitable for manufacturers and retailers but burdens the consumer with even more choices.

We set out in this study to determine whether the pink tax persists across a wide range of personal care products. While we found that it does in some cases, the picture that emerged was more complex. Namely, our findings point to a practice beyond the pink tax, one that involves excessive differentiation on the basis of gender. In other words, the primary characteristic of the market of personal care products is gender branding, or differentiating similar (often identical) products by gender as well as within gender (e.g., dozens of lotions marketed to women with only one or two qualities differentiating them).

## Limitations

Our study is the largest to date, covering more personal care products than previous studies. As such, we were able to determine the extent to which gender-pricing occurs across a wide variety of products that span the price range. We were not able

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<sup>4</sup> This study only includes disposable razors. Electric shavers for men are significantly more expensive than disposables and would have skewed the data. Shaving creams/gels, while more expensive for men, are only necessary for shaving with disposable or straight razors. Therefore, if men are shaving with electric shavers, which may initially cost more but last longer than disposable razors, the need to purchase shaving creams/gels may significantly decrease.

to conduct side-by-side comparisons to determine whether an identical product “for women” costs more or less than that “for men,” in large part due to the excessive differentiation we observed that makes it difficult to identify a sample of identical products.<sup>5</sup> Our study is also restricted to personal care items, which have been shown in past studies to reflect gendered pricing. Whether gender-pricing persists in other consumer products remains to be determined. We also were not able to explore how marketing is shaped not only by gender but also race or social class, and how these might intersect. For example, we did find seemingly racialized products such as *Axe’s Dark Temptation*<sup>TM</sup> body wash or *Black Chill*<sup>TM</sup> deodorant. An investigation of these intersectionalities does not lend itself to a quantitative analysis. Finally, our study is unable to determine how gender pricing or differentiation is related to consumer behavior.

## Conclusion

Some consumer researchers argue that we are moving towards a post-gender era in the marketplace. Murtell [22] argues that due to greater numbers of Generation Z and millennials presenting as gender-fluid or gender non-conforming, that the beauty and fashion industries have followed suit by moving toward gender-neutral branding. Our study suggests otherwise, or at least that gender branding is still alive and well.<sup>6</sup> Our findings show that gender branding is a critical marketing strategy for personal care products. These findings are not necessarily inconsistent with the notion that we are moving toward a post-gender or more gender-fluid culture. Kimmel [14] suggests that if we are indeed moving towards a post-gender era, there would be pushback and resistance to the change, and further reinforcement of the traditional gender behaviors. We would expect that many consumers would rely on gendered products. As Avery [2, p. 333] concluded “Masculine and feminine identity markers are more valuable to consumers when gender roles are permeable, making gendered

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<sup>5</sup> We had originally intended to conduct a side-by-side comparison of identical products marketed to men and to women but were not able to locate a sufficient number of “identical” products to conduct a meaningful analysis, even with our large dataset.

<sup>6</sup> To explore this possibility, we conducted a basic google search of each product by retailer, using filters “men/male,” “women/female,” and “unisex/gender neutral” (if available). The numbers for “women’s” or “men’s” products do not match the numbers in our sample given that we further refined gendered products by eliminating products that overlap or are not actual products (e.g., hair removal creams rather than shaving creams). It should be noted that in three cases, retailers did not provide a “gender neutral” search filter for products. More importantly, many products listed as “gender neutral” or “unisex” are in fact gendered, and clearly so. Thus, the “hits” returned from these searches produce a crude and somewhat inaccurate count of products marketed as men’s, women’s or unisex/gender neutral, but they give us a general idea of how gendered products are. There were only three categories of products in our study for which a “gender neutral” filter produced more hits than “men” or “women” filters (shampoo, body wash, lotion). There were about twice as many gender-neutral lotions and shampoos as ones marketed to women or men (1,148 versus 535, and 2345 versus 1,193, respectively) and slightly more gender-neutral body washes as gendered ones (937 vs 733). For comparison purposes, the ratio of gendered to gender-neutral products were as follows: deodorants, 1381:360; razors, 929:64; razor cartridges, 350:16; body sprays, 734:227; bar soaps, 187:174; shaving gels/creams, 256:51.

consumption a powerful force in the postmodern era.” Although these gendering practices by manufacturers and gender performances by consumers may represent backlash, they clearly reveal how gender structures are entrenched and perpetuated in the market, hampering any efforts to combat gendered pricing in the marketplace.

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**Declarations**

**Conflict of interest** There are no conflicts of interests or competing interests.

**Ethics approval** This study does not use human subjects.

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