ON USING UNDERGRADUATE STUDENT SAMPLES
IN LUXURY RESEARCH

Francisco J. Conejo, INCAE, Costa Rica, francisco.conejo@incae.edu
Lawrence F. Cunningham, University of Colorado, USA, lawrence.cunningham@ucdenver.edu
Clifford E. Young, University of Colorado, USA, cliff.young@ucdenver.edu

ABSTRACT

The inadequacy of student samples for luxury research might make intuitive sense, even be self-evident. However, the proposition has received scant empirical support. This study begins to address the situation, exploring the feasibility of students as luxury research subjects. A sample of 173 undergraduate students listed the services that they considered luxurious in a spontaneous free-association exercise. Responses were thematically clustered and then analyzed in terms of two age-groups. Results indicate that young undergrads indeed seem unsuitable for luxury research. Their limited knowledge, life experience, and sophistication result in narrow luxury notions. However, and while still unideal, older, more experienced undergrads are more viable. Unless service stimuli specifically target collegiate demo/psychographics, luxury researchers, especially scale developers, are advised against using student samples.

KEYWORDS: Luxury, service, research, student, sample.

INTRODUCTION

As the high-end sector continues to develop and grow increasingly complex, it becomes essential that marketers improve their understanding of luxury consumption. A number of authors have cautioned against the use of student samples within luxury research, e.g. (Christodoulides et al., 2009) or (Kapferer & Valette-Florence, 2016), among others. However, studies in the field, including prominent ones like Vigneron and Johnson (2004), continue to use student samples, not actual consumers.

This state of affairs is problematic. Students generally have limited income, independence, and sophistication. They also tend to lack actual luxury consumption experience. The use of students in luxury research thus likely thwarts results. It also puts into question how findings might generalize to real consumers, impacting both theory and practice (Conejo & Cunningham, 2016).

That student samples are inadequate for luxury research might make intuitive sense, even be self-evident. However, the proposition has received scant empirical attention. Without proper testing, the notion remains unsubstantiated. Furthermore, the nuances that student samples might exhibit remain unknown. The present study starts to address these issues. Without going into demographic and psychographic detail, and focusing only on the age variable, this study explores the feasibility of students as luxury research subjects. It does so by assessing the services that a sample of undergraduates deemed luxurious.

Two reasons support the use of luxury services. On the one hand, high-end services have been experiencing accelerated growth over the past several years (Chang & Ko, 2017; Yang & Mattila, 2016). Given services' increasing relevance within the high-end sector (Bain, 2016), it makes sense to understand how students perceive them. On the other hand, luxury goods like diamond rings or expensive cars are rather straightforward. It is easy for students (and consumers generally) to understand their luxuriousness. In contrast, luxury services are more subtle, abstract, and thus harder to comprehend. How students perceive this more complex category indicates, admittedly imperfectly, how suitable they might be as luxury research subjects.

The present paper begins by briefly reviewing the issue of student research samples. The methods section then addresses data collection and the nature of the sample used. The analysis, results, and discussion

sections come next. Some limitations and suggestions for future research are then presented, followed by some closing thoughts.

This paper not only provides empirical support on the inadequacy of student samples for luxury research. It also strives to raise awareness and stimulate discussion of this issue. The paper also hopes to encourage further research on student samples, contributing to luxury marketing's methods. More broadly, the list of luxury services identified should help academics and practitioners better understand luxury perceptions. The list can help in the selection of service stimuli, thereby contributing to a broad range of research within the field.

BACKGROUND

Throughout the decades, the literature has amply commented on research using student samples, e.g. Campbell and Stanley (1963), Cunningham et al. (1974), Burnett and Dune (1986), Steinfatt (1991), or Bello et al. (2009), among other. More recently, Espinosa and Ortinau's (2016) review found that nearly half the studies published in top marketing journals between 2009 and 2011 relied on student data. Specifically, 31% of studies used student data only, while an additional 15% combined student and non-student data.

The prevalence of student samples, presumably higher among lower-tiered journals, can be variously explained. On the one hand, students constitute captive audiences within university classrooms. Not only are they plentiful, but quickly, easily, and cost-effectively accessed by researchers. On the other hand, students can be more motivated to participate. Incentives like extra credit, cash, or small gifts can easily sway them. Finally, student samples are deemed relatively homogenous. Researchers might use this feature to reduce their data's variability, which facilitates hypothesis testing and theoretical development (Peterson, 2001).

Despite the convenience that student samples might offer, they also have significant drawbacks. The main argument against their use centers on the generalizability of findings. The literature has long noted how college students are not demographically, psychographically, and behaviorally representative of the general population, especially not of specific subsegments therein. Students also lack life experience, maturity, and emotional stability. Grossly inadequate to gauge adult opinions and behaviors (Burnett & Dune, 1986; Greenberg, 1987; James & Sonner, 2001; Sears, 1986), student-based findings are necessarily suspect (Peterson, 2001; Wells, 1993).

The differences between university students and the general population vary according to context. However, Espinosa and Ortinau's (2016) findings are rather enlightening in this regard. While comparing both types of samples, the researchers found similar gender distributions. However, non-college consumers were on average 30 years older; about 13 times as likely to be married; over a third more likely to have dependent children at home; about 15 times more likely to be divorced; almost three times more likely to be employed full-time; nearly four times less likely to be employed part-time, and earned about 75% more per year. Moreover, while 93% of students had completed some college, only 16% of non-students had some college experience. At the same time, 33% of non-students had four-year or graduate degrees, and another 24% held two-year degrees. Finally, students dined out significantly more, in addition to having unique living arrangements like being at home with parents, in dorms, or with roommates.

The above illustrates the perils of using student samples. Yet luxury research continues to do so. This, despite an ample body of social science literature warning against the practice, see Peterson (2001). Also, despite explicit warnings within the luxury marketing literature. To mention but one, Roux et al. (2017) indicate, p. 109, that *"… the use of students and convenience samples calls their findings' generalizability*

to actual luxury buyers into question." However, the adequacy of student samples for luxury research has not been empirically tested. Hence the present study.

METHOD

This study took place at a medium-sized western U.S. university. Three core (Principles of Marketing) and one elective section (Music Marketing) served as data collection vehicles. As part of a series of class discussions, the lead researcher asked his students to individually list the three luxury services that first came to mind. The exercise was done at the beginning of class, before discussing luxury services, to not influence responses. Requesting three exemplars follows the approach suggested by Stepchenkova and Li (2014). Having respondents answer freely made the data more personally relevant. Three answers also provided some variety in terms of individual perceptions. At the same time, limiting responses to three short phrases kept the answering fast and easy. The latter is important, considering dwindling student attention spans, see Lords (2018).

Spontaneous response questions have been long used in marketing to study brand awareness within product categories. These questions are unprompted and entail respondents freely listing the brands that first come to mind. Relative brand salience can then be inferred by the number of times each brand is mentioned (Laurent et al., 1995; Romaniuk & Sharp, 2004). One might thus consider the luxury services here listed as akin to students' evoked consideration set. Without being top-of-mind, they still reflect a relatively strong aggregate share of mind, e.g. Howard and Sheth (1969).

Student participation was anonymous, voluntary, and rewarded with extra credit. The researcher offered an alternative task in case students might prefer to earn the points doing something else. Of 184 total enrolled students, 173 responded. This amounts to a 94% participation rate. As a whole, the student sample was 53% male and 47% female. Respondents' age ranged from 19 to 48 years, with the average being 24, the median 23, and the standard deviation 4.4 years. The sample did not show a normal age distribution. It instead featured a tail toward the upper age range. Figure 1, below, shows the student sample's age distribution.

Figure 1: Student Sample Composition by Age
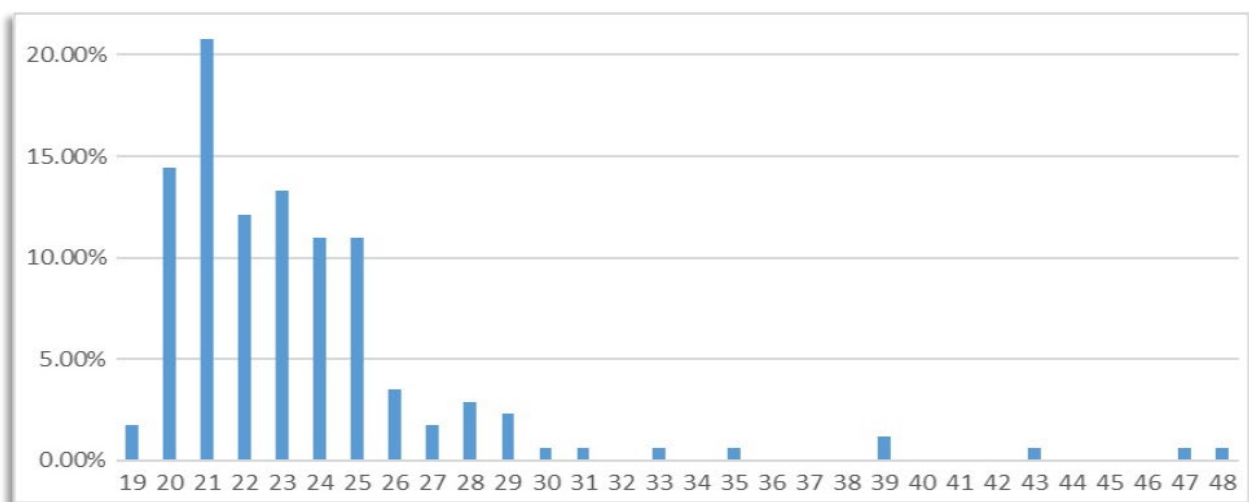
ANALYSIS & RESULTS

The 173 students provided 538 total responses. The researcher deleted four as they did not refer to luxury services but physical goods (expensive sneakers, luxury car, stuffed animal, and custom product). The deletion left 534 usable responses. Respondents mentioned an average of 3.09 luxury services each. That

the average is above three per person is explained by some eager students going beyond what was required, mentioning four or five luxury services.

The lead researcher then clustered the 534 services mentioned into overarching categories. For example, the "full-service store," "buying a luxury car," and "making a high-end purchase" responses were all placed under the *High-End Shopping* category. The consolidation resulted in 73 different service categories; these then ordered in terms of salience. The left half of Table 1, below, shows the luxury services mentioned in aggregate, arranged in descending order. Each service has its total number of responses and its relative importance as a percentage of the total. The right half of the table shows the absolute and relative frequencies of the services mentioned by each age subsample.

Undergrad students might be similar in some respects. Though in others, they are quite diverse. One of these divergent aspects is age, which by impacting students' life experiences, influences their luxury perceptions. The lead researcher thus split the student sample to account for the impact that the age variable might have. The median age allowed to attain two approximately equally-large respondent subsamples, which were then compared in terms of luxury service mentions.

The younger student subsample comprised 85 students, 49% of respondents. Their age range was 19 to 22 years, with an average of 21, a median of 21, and a standard deviation of 0.82. 45% of this subsample was male, while 55% female. The older student subsample comprised 88 students, 51% of respondents. Their age range was 23 to 48 years, with an average of 26, a median of 25, and a standard deviation of 4.89. 61% of this subsample was male, while 39% female. Noteworthy is how different the subsamples were in terms of age and gender distribution, despite both being undergrad students. These differences illustrate the inappropriateness of assuming that undergrad student samples are homogenous.

Table 1: Luxury Services Mentioned by Students

	Luxury Services Mentioned (* = by the older subsample only)	Total Count	% Tot	19-22 Count	% Cat.	23-48 Count	% Cat	O-Y Index
1	**High-End Hotel**	30	5.62%	11	37%	19	63%	8
2	**High-End Restaurant**	29	5.43%	13	45%	16	55%	3
3	**High-End Shopping**	27	5.06%	17	63%	10	37%	-7
4	**Personal Driver/Chauffer**	24	4.49%	12	50%	12	50%	0
5	**VIP Club Section/Bottle Service**	23	4.31%	10	43%	13	57%	3
6	**Premium Concert/Show Tickets**	22	4.12%	10	45%	12	55%	2
7	**Limo Service/Ride**	21	3.93%	9	43%	12	57%	3
8	**Pick Up/Delivery**	19	3.56%	13	68%	6	32%	-7
9	**Premium Sports Tickets**	18	3.37%	9	50%	9	50%	0
10	**Valet Parking**	18	3.37%	13	72%	5	28%	-8
11	**Personal/Home Chef**	17	3.18%	10	59%	7	41%	-3
12	**Uber Black/XL**	16	3.00%	10	63%	6	38%	-4
13	**Cleaning Service**	13	2.43%	5	38%	8	62%	3
14	**High-End Hair Salon**	13	2.43%	8	62%	5	38%	-3
15	**Maid/Housekeeper at Home**	12	2.25%	6	50%	6	50%	0
16	**Hotel Suite/Penthouse**	12	2.25%	8	67%	4	33%	-4
17	**Uber/Lyft Car Service**	11	2.06%	9	82%	2	18%	-7
18	**Custom/Tailored Clothing**	11	2.06%	7	64%	4	36%	-3
19	**Cruise**	10	1.87%	5	50%	5	50%	0
20	**Nail Salon Treatment**	10	1.87%	6	60%	4	40%	-2
21	**Personal Butler at Home**	9	1.69%	6	67%	3	33%	-3
22	**Personal Shopper**	8	1.50%	3	38%	5	63%	2
23	**Premium Movie Theater Tickets**	8	1.50%	6	75%	2	25%	-4
24	**Car Wash & Detailing**	8	1.50%	2	25%	6	75%	4
25	**Prem. Amusement Park Tickets**	7	1.31%	4	57%	3	43%	-1
26	**Personal Stylist at Home**	7	1.31%	4	57%	3	43%	-1
27	**Personal Trainer**	7	1.31%	4	57%	3	43%	-1
28	**Massage**	7	1.31%	4	57%	3	43%	-1
29	**Wedding Dress Shopping**	6	1.12%	3	50%	3	50%	0
30	**Personal Assistant/Concierge**	6	1.12%	4	67%	2	33%	-2
32	**Plastic/Cosmetic Surgery**	5	0.94%	3	60%	2	40%	-1
33	**Various Leisure Activities**	5	0.94%	2	40%	3	60%	1
34	**High-End Resort**	5	0.94%	3	60%	2	40%	-1
35	**Pet Grooming Service**	4	0.75%	2	50%	2	50%	0
36	**Hotel**	4	0.75%	3	75%	1	25%	-2
37	**High-End Touring ***	4	0.75%	0	0%	4	100%	4
38	**All-Inclusive Resort ***	4	0.75%	0	0%	4	100%	4

39	**Airport Lounge/VIP assistance**	4	0.75%	2	50%	2	50%	0
40	**Car Servicing**	3	0.56%	2	67%	1	33%	-1
41	**High-End Apartment**	3	0.56%	2	67%	1	33%	-1
42	**Resort ***	3	0.56%	0	0%	3	100%	3
43	**Lux Car Rental ***	3	0.56%	0	0%	3	100%	3
44	**Shoeshine**	3	0.56%	1	33%	2	67%	1
45	**Private Classes/Tutors**	3	0.56%	2	67%	1	33%	-1
46	**Traditional Restaurant ***	3	0.56%	0	0%	3	100%	3
47	**High Arts Shows ***	3	0.56%	0	0%	3	100%	3
48	**Premium Air BnB ***	2	0.37%	0	0%	2	100%	2
49	**Country Club ***	2	0.37%	0	0%	2	100%	2
50	**Body Guard/Private Security ***	2	0.37%	0	0%	2	100%	2
51	**Private Plane/Jet time share ***	2	0.37%	0	0%	2	100%	2
52	**Yacht Rental ***	2	0.37%	0	0%	2	100%	2
53	**Prem. Financial Services ***	2	0.37%	0	0%	2	100%	2
54	**Foreign Travel/Vacation ***	2	0.37%	0	0%	2	100%	2
55	**Premium Hospital Service ***	2	0.37%	0	0%	2	100%	2
56	**Laser Hair Removal**	2	0.37%	1	50%	1	50%	0
57	**Concert/Show ***	2	0.37%	0	0%	2	100%	2
58	**College/University ***	2	0.37%	0	0%	2	100%	2
59	**Private Education/School**	2	0.37%	1	50%	1	50%	0
60	**Nanny at Home ***	2	0.37%	0	0%	2	100%	2
61	**Event/Party Planner**	2	0.37%	1	50%	1	50%	0
62	**Private Nutritionist ***	1	0.19%	0	0%	1	100%	1
63	**Private Gardner ***	1	0.19%	0	0%	1	100%	1
64	**Pet Sitter ***	1	0.19%	0	0%	1	100%	1
65	**Makeup Professional ***	1	0.19%	0	0%	1	100%	1
66	**Craft Café ***	1	0.19%	0	0%	1	100%	1
67	**High-End Bar ***	1	0.19%	0	0%	1	100%	1
68	**Car Rental ***	1	0.19%	0	0%	1	100%	1
69	**Premium Gym Membership ***	1	0.19%	0	0%	1	100%	1
70	**Premium Music Streaming ***	1	0.19%	0	0%	1	100%	1
71	**Painted Portrait ***	1	0.19%	0	0%	1	100%	1
72	**Dry Cleaning ***	1	0.19%	0	0%	1	100%	1
73	**Golf Caddie ***	1	0.19%	0	0%	1	100%	1
		534	**100%**	**260**	**49%**	**274**	**51%**	
		Total		**19-22**		**23-49**		

Note: Flying first class is not listed as it served as an example to illustrate the exercise for students.

To the far right of Table 1 is an index. It shows in relative terms how much the services mentioned skew towards either subsample. With the Index = (23-48 Count) - (19-22 Count), a positive number indicates that the service was mostly mentioned by the older subsample. A negative number means that the service was mainly brought up by the younger subsample. The magnitude of these positive or negative numbers indicates the strength of the skew.

A subtractive index was used instead of a ratio one for two reasons: On the one hand, ratios can be misleading. This occurs when the pool of numerators and denominators varies significantly in terms of magnitude, as presently the case. To illustrate, a ratio of 12/10 results in an index of 120%, while a ratio of 2/1 results in one of 200%. The difference between 10 and 12 is two times larger than that between 2 and 1. However, the latter ratio is higher than the former. A distorted data portrayal results, giving the second ratio excessive relative importance. On the other hand, ratio indexes might involve dividing by zero, a mathematical impossibility with integers, e.g. Kihara and Pauly (2016).

DISCUSSION

Salience reflects the quantity and quality of memory structures associated with a product category (Romaniuk & Sharp, 2004). The luxury services mentioned were thus analyzed in terms of number and nature.

Though before commenting on both these aspects, it is necessary to point out that luxury is not a clear-cut dichotomous notion. Products are not luxurious or not. They instead operate along continua of luxuriousness, varying in terms of degree and kind (Berry, 1994; Kapferer, 2015). Moreover, luxury perceptions are subjective. They depend on the situation and the specific individual making the assessment (Kemp, 1998). The services mentioned should thus not be judged as either luxurious or not. They should instead be borne as is, their valence within the eyes of those having mentioned them.

It is also a-priori acknowledged that the overarching service categories are somewhat fuzzy. Several of these could have been merged, which would have resulted in a more parsimonious list. An example would be the Hotel, Hotel Suite, and High-End Hotel categories. However, they were purposely left separate. Doing so helped illustrate how luxury perceptions relate to age subsamples. Lumping service categories together would have otherwise buried these nuances.

A total of 73 luxury service categories were obtained. These seem surprisingly many. Though they were expected, given the relatively high number of respondents, the three answer options offered, and the open nature of answers. The abundance of luxury service categories explains the relatively low salience of those mentioned most frequently. The top three, *High-End Hotel*, *High-End Restaurant*, and *High-End Shopping*, garner a mere 5.6%, 5.4%, and 5.1% of mentions, respectively. From there, the proportion of mentions per category decreases gradually and non-linearly until reaching twelve different single mentions at 0.2% each.

That luxury service mentions decrease non-linearly is consistent with Laurent et al. (1995). The authors found spontaneous brand awareness scores across product categories to fall in a somewhat exponential fashion. The frequency decrease presently obtained is also consistent with Pan and Li (2011). The authors found that the distribution of free destination image associations ended in a long tail. Present results indicate that, overall, a few luxury services are very salient, while most others rarely mentioned. Luxury service awareness thus seems to be concentrated around a few core ones, complemented by numerous diverse peripheral others.

The distribution of luxury service mentions follows the mechanics of recall. Per Laurent et al. (1995), more frequently-mentioned services likely build their high awareness at the expense of less frequently mentioned ones, blocking the latter's spontaneous recollection. This dynamic stems from humans' limited memory and information processing capacity. When probed spontaneously, people typically recall only a few highly-salient pieces of information (Miller, 1956). Moreover, individuals usually lack the motivation to devote significant effort to their consumption choices. Instead of carefully evaluating a comprehensive set of options to make an optimal choice, people mostly settle for what is reasonable from a limited repertoire of options (Ehrenberg et al., 2004).

The above notwithstanding, the number of luxury services mentioned differs when broken down by age subsample. The elder one, comprising students 23-48, brought up all luxury services. However, the younger subsample, encompassing students 19-23, mentioned only 44 services, 60% of the total. (Services mentioned by the older subsample only are identified by an asterisk in Table 1.) This distribution indicates that in terms of number/variety, older students are significantly more familiar with luxury services. This higher acquaintance likely stems from their added personal/professional life experience. Even though the average age of older students is only four years higher, 26 versus 22, these few extra years do make a significant difference in the number of life experiences, and thereby, in their exposure to luxury services.

As to nature, the services mentioned encompass different types of luxury. Alleres (2000) indicates that luxuries may be grouped into three broad categories. A*ccessible/masstige* products are low-price and widely available. *Intermediate/premium* products are more expensive and selectively distributed. Finally, *inaccessible/absolute* products are extraordinarily costly and rare, reserved for ultra-wealthy elites. The luxury services mentioned span these three categories. They go from low cost/widely available services, say food delivery, all the way to very high cost/exclusive services, like luxury yacht rentals.

It might seem that undergrads as a whole are indeed able to provide a rather diverse luxury service selection. However, the nature of services mentioned again differs significantly when broken down by age group.

The older subsample, having mentioned all services, not only shows the highest richness and diversity. Also revealing are the service categories where these older students over-index, identified by high positive numbers. Categories like *High-End Hotels*, *VIP Club Sections*, or *High-End Touring* suggest more expensive luxury notions. Classifications such as *High-Arts Shows* (theatre, opera, ballet) or *Premium Financial Services* (elite cards, personal planner) indicate more sophisticated luxury notions. At the same time, categories like *House Cleaning*, *Car Detailing*, or *Home Nannies* reveal functional luxury elements, presumably associated with their more complicated lives. The above suggests that as individuals mature and go through new lifecycle stages/experiences, say working full-time or having children, their notion of what might be luxurious develops and expands.

The younger sub-sample mentioned significantly fewer luxury services. The diversity of those mentioned is not only lower but more concentrated. The service categories where these younger students over-index, identified by high negative numbers, are also revealing. Classifications like *Pick-Up/Delivery*, *Valet Parking*, and *Uber/Lyft Rides* suggest convenience-based, albeit inexpensive, luxury service notions. Categories that are somewhat over the top, say having a *Home Chef*, *Personal Butler*, or *Clothes Tailor*, suggest a strong media influence, in which idealized and excessive luxury notions are portrayed. Conversely, categories like *Car Servicing* (oil change, gas fill-up, servicing) and *Movie/Amusement Park Tickets* indicate relatively basic and low-cost luxury service notions, presumably tied to young students' limited-means.

It thus seems that services ordinarily taken for granted by the general population might be at times considered luxurious by younger students. An example would be them over-indexing on *hotels*, not *High-End Hotels*. This presumably derives from limited means, and perhaps customarily staying at motels, hostels, or "crashing" on someone's couch when away from home. This rather basic/low-cost luxury notion would also explain why some luxury taxonomies, developed with student samples, have been unable to be replicated. Most notable is Vigneron and Johnson's (2004) BLI. Some of the brands used to develop it, like Levi's or Revlon, might have been considered luxurious by their student samples. However, these brands are by no means perceived as luxurious by the general population, especially not by high-end consumers. Hence that framework's factorial instability, see Conejo et al. (2020).

The above suggests that young students' lifestyles heavily influence their luxury perceptions. A couple of final examples illustrate this. Within the *Event/Party Planner* category, older respondents used the broader, more flexible *event* term. In contrast, younger respondents focused on the specific and presumably personally relevant *party* term. Similarly, within the *Private Classes* category, younger respondents referred to academic tutors or instrument teachers. In contrast, older respondents mentioned wine tasting/cooking classes. The previous examples indicate different lifestyles and sophistication levels between younger and older students, hence their different luxury perceptions.

We conclude that younger undergrad students are indeed inadequate for luxury service research, and presumably for luxury research generally. In terms of the number and nature of services mentioned, younger students fall short when compared to their older counterparts. Unless the service categories researched are specifically relevant to students, say youth retail, transportation, or entertainment, luxury research should avoid using undergrad samples. While young students might know of high-end services through peers or social media, they are unlikely to have direct knowledge and experience with them. This feature is particularly problematic given luxury's complex nature: Encompassing hedonic, symbolic, and affective aspects, among others, research subjects' first-hand familiarity with luxury is essential. Young students' lack thereof severely limits their usefulness in luxury research.

While still inadequate compared to general population samples, older undergrads do seem more viable than their younger counterparts. The number of luxury services older students mentioned is both significantly larger and more diverse. This feature suggests a higher first-hand familiarity with luxury, as well as more sophisticated notions of it. These findings would be consistent with those of e.g. James and Sonner (2001). The authors also found older, working students to be more reasonable marketing research subjects. As such, non-traditional students might serve preliminary research stages, as used by e.g. (Conejo et al., 2019).

LIMITATIONS AND FUTURE RESEARCH

This study used spontaneous response questions to gauge luxury service salience. While it produced useful insights, the research acknowledges that category cueing is not the only way through which associations are elicited. Personal, environmental, and situational factors also play a role in the recall process (Romaniuk & Sharp, 2004). Future research might thus look into multivariate luxury service recall models. Sufficiently large samples might even allow studies to go beyond basic age partitions, as presently done, and consider other variables such as gender or socio-economic level. Probabilistic techniques able to model recall propensity and intensity, say Rasch Modelling, e.g. (Conejo et al., 2017), are also called for. As are those techniques that forego conscious responding altogether, such as those linked to neuromarketing, e.g. Conejo et al. (2007).

This research used a single university sample. However, students from other disciplines, schools, and institutions, as well as from other cities, states, and countries, are likely to produce different results (Espinosa & Ortinau, 2016). Future inquiries into luxury service salience should thus look into using various other student samples to see if differences and patterns emerge. Particularly intriguing would be to assess

students from private institutions, especially those reserved for the elites. Given the marked socio-economic difference, not to mention the latter's superior luxury experience, interesting results are bound to emerge.

This study looked into the luxury service perceptions of university undergrads. However, it would also be interesting to compare them against those of graduate students and non-students. A good starting point would be to poll similarly-aged young adults, who for different reasons skipped college and went directly into the workforce. Also, interesting would be to look into the luxury service salience among the general adult population. Using large enough samples would allow not only to investigate the different generational cohorts but perhaps segment respondents into unique perceptual clusters.

Finally, this research identified some of the services that students deem luxurious. However, the more fundamental question, *why* these services are considered luxurious, remains unanswered. Future research should also look into this issue.

CLOSING THOUGHTS
Luxury markets are growing increasingly diverse and complex. Understanding the nuances of luxury consumption is thus more important than ever. Fields become increasingly experimental as they develop (Gurzki & Woisetschläger, 2017; Most et al., 2018). With luxury research rapidly evolving, the field must fine-tune its methods and move away from using student samples. While the latter are no doubt convenient, they are unable to capture luxury's scope and richness. Most concerning is that the insights obtained from student samples do not generalize to the broader population, especially not to better-off segments. These limitations severely impact theory and practice. Luxury research needs instead to use more targeted sampling frames. Ones that demographically, psychographically, and behaviorally mirror actual luxury consumers.

Marketers have also long recognized that findings become distorted if subjects are exposed to unfamiliar test stimuli (Silk & Urban, 1978). Luxury research must thus make sure that its stimuli are both relevant and familiar. Present results also help in this regard: By having identified which luxury services are more salient, future studies can pre-test them and focus on those deemed most appropriate for their particular purpose. Moreover, the luxury services here listed can serve to benchmark the familiarity of other luxury services not mentioned. While the limitations of this exploratory study are acknowledged, it is nonetheless considered the first step in a new line of inquiry. The authors invite discussion.

REFERENCES

Alleres, D. (2000). *Luxo... Estratégias Marketing*. Rio de Janeiro, Brazil: Editora FGV.

Bain. (2016). *Luxury Goods Worldwide Market Study - Winter*. Milan, Italy: Bain & Co.

Bello, D., Leung, K., Radebaugh, L., Tung, R.L., & VanWitteloostuijn, A. (2009). From the editors: Student samples in international business research. *Journal of International Business Studies, 40*(3), 361-364.

Berry, C.J. (1994). *The Idea of Luxury: A Conceptual and Historical Investigation*. Cambridge, UK: Cambridge University Press.

Burnett, J.J., & Dune, P.M. (1986). An appraisal of the use of student subjects in marketing research. *Journal of Business Research, 14*(4), 329-343.

Campbell, D.T., & Stanley, J.C. (1963). *Experimental and Quasi-Experimental Designs for Research*. Boston, MA: Houghton Mifflin.

Chang, Y., & Ko, Y.J. (2017). Consumers' perceived post-purchase risk in luxury services. *International Journal of Hospitality Management, 61*, 94-106.

Christodoulides, G., Michaelidou, N., & Li, C.H. (2009). Measuring perceived brand luxury: An evaluation of the BLI scale. *Journal of Brand Management, 16*(5), 395-405.

Conejo, F., Khoo, C., Tanakinjal, G., & Yang, L. (2007). Neuromarketing: Will it revolutionize business? *International Journal of Business and Management, 2*(6), 72-76.

Conejo, F.J., & Cunningham, L.F. (2016). Current Issues in Luxury Brand Research. *Journal of International Marketing Strategy, 4*(1), 66-77.

Conejo, F.J., Cunningham, L.F., & Young, C.E. (2020). Revisiting the Brand Luxury Index: New empirical evidence and future directions. *Journal of Brand Management, 27*(1), 108-122.

Conejo, F.J., Wooliscroft, B., & Insch, A. (2017). Exploring Brand Personality Scale Development Using Rasch Modelling. *Marketing Bulletin, 27*(1), 1-23.

Conejo, F.J., Young, C.E., Wooliscroft, B., & Parthasarathy, M. (2019). Addressing Construct Intensity in Entrepreneurship: Log-Transformed Guttman Scaling with Need for Achievement as Exemplar. *Entrepreneurship Research Journal, Advance*(https://doi.org/10.1515/erj-2018-0125).

Cunningham, W.H., Anderson, W.T., & Murphy, J.H. (1974). Are Students Real People? *Journal of Business, 47*(3), 399-409.

Ehrenberg, A.S.C., Uncles, M.D., & Goodhardt, G.J. (2004). Understanding brand performance measures: using Dirichlet benchmarks. *Journal of Business Research, 57*(12), 1307-1325.

Espinosa, J.A., & Ortinau, D.J. (2016). Debunking legendary beliefs about student samples in marketing research. *Journal of Business Research, 69*(8), 3149-3158.

Greenberg, J. (1987). The college sophomore as guinea pig: Setting the record straight. *Academy of Management Review, 12*(1), 157-159.

Gurzki, H., & Woisetschläger, D.M. (2017). Mapping the Luxury Research Landscape: A Bibliometric Citation Analysis. *Journal of Business Research, 77*(1), 147-166.

Howard, J.A., & Sheth, J.N. (1969). *The Theory of Buyer Behavior*. New York, NY: John Wiley and Sons.

James, W.L., & Sonner, B.S. (2001). Just say no to traditional student samples. *Journal of Advertising Research, 41*(5), 63-72.

Kapferer, J. (2015). *Kapferer on Luxury: How Luxury brands can grow yet remain rare*. London, UK: Kogan Page.

Kapferer, J.N., & Valette-Florence, P. (2016). Beyond Rarity: The Paths of Luxury Desire. How Luxury Brands Grow yet Remain Desirable. *Journal of Product & Brand Management, 25*(2), 120-133.

Kemp, S. (1998). Perceiving Luxury and Necessity. *Journal of Economic Psychology, 19*(5), 591-606.

Kihara, T., & Pauly, A. (2016). Dividing by zero-how bad is it, really? *arXiv*(1606.04126).

Laurent, G., Kapferer, J.-N., & Roussel, F. (1995). The Underlying Structure of Brand Awareness Scores. *Marketing Science, 14*(3), 170-179.

Lords, S. (2018). As Attention Spans Get Shorter, Content Gets Even Shorter – What Would Ken Burns Do? Retrieved from www.huffpost.com/entry/as-attention-spans-get-shorter-content-gets-shorter_b_5a57ae42e4b00a8c909f7f1e

Miller, G.A. (1956). The magical number seven, plus or minus two: Some limits on our capacity for processing information. *Psychological Review, 63*(2), 81-97.

Most, F., Conejo, F.J., & Cunningham, L.F. (2018). Bridging past and present entrepreneurial marketing research: A co-citation and bibliographic coupling analysis. *Journal of Research in Marketing and Entrepreneurship, 20*(2), 229-251.

Pan, B., & Li, X. (2011). The long tail of destination image and online marketing. *Annals of Tourism Research, 38*(1), 132-152.

Peterson, R.A. (2001). On the use of college students in social science research: Insights from a second-order meta-analysis. *Journal of Consumer Research, 28*(3), 450-461.

Romaniuk, J., & Sharp, B. (2004). Conceptualizing and measuring brand salience. *Marketing Theory, 4*(4), 327-342.

Roux, E., Tafani, E., & Vigneron, F. (2017). Values associated with luxury brand consumption and the role of gender. *Journal of Business Research, 71*(Feb.), 102-113.

Sears, D.O. (1986). College sophomores in the laboratory: Influences of a narrow data base on social psychology's view of human nature. *Journal of Personality and Social Psychology, 51*(3), 515-530.

Silk, A.J., & Urban, G.L. (1978). Pre-test-market evaluation of new packaged goods: A model and measurement methodology. *Journal of Marketing Research, 15*(2), 171-191.

Steinfatt, T.M. (1991). External validity, internal validity, and organizational reality: A response to Robert L. Cardy. *Management Communication Quarterly, 5*(1), 120–125.

Stepchenkova, S., & Li, X. (2014). Destination image: Do top-of-mind associations say it all? *Annals of Tourism Research, 45*, 46-62.

Vigneron, F., & Johnson, L.W. (2004). Measuring perceptions of brand luxury. *Journal of Brand Management, 11*(6), 484-506.

Wells, W.D. (1993). Discovery-Oriented Consumer Research. *Journal of Consumer Research, 19*(4), 489-504.

Yang, W., & Mattila, A.S. (2016). Why do we buy luxury experiences? Measuring value perceptions of luxury hospitality services. *International Journal of Contemporary Hospitality Management, 28*(9), 1848-1867.

Author Biographies

Dr. Francisco J. Conejo is an Associate Professor of Marketing/Researcher at INCAE Business School, Costa Rica. His research intersects branding, psychology, and entrepreneurship, having been published in outlets such as the *Journal of Brand Management*, *Journal of Macromarketing, Journal of Place Branding and Public Diplomacy*, *Journal of Sport and Tourism*, *Journal of International Marketing Strategy*, and the *International Journal of Business and Management*, among others. Before academia, Dr. Conejo worked extensively in industry, marketing consumer goods and services across a variety of categories. He is an experienced ethnic marketer, having serviced Hispanic and African American consumer markets. He is also an experienced international marketer, having helped take American brands around the world.

Dr. Lawrence F. Cunningham is discipline Director and Professor of Marketing at the University of Colorado Denver.

Professor Cunningham's research interests are in the areas of services marketing and international marketing. He has published in the *Journal of Service Marketing*, *Journal of Service Management*, *The Transportation Journal, The Service Industries Journal, International Marketing Review, and Advances in Services Marketing and Management and the Journal of Brand Management.* He currently serves or has served on editorial boards for *the Journal of Business Research, Journal of Service Management, and the Service Industries Journal.*

Professor Cunningham has held a number of titles at the Business School of the University of Colorado Denver including the Accenture Term Professor of Marketing, the Joseph and the Martha Davis Term Professor of Marketing. Professor Cunningham was chosen as Fulbright Distinguished Chair at the University of Linz in the 2006–2007 Fulbright Program.

Professor Cunningham has taught extensively overseas. He held a joint appointment of Distinguished Research Professor and Fellow at EDHEC (2002-2008), one of the leading business schools in France.

Professor Cunningham has also served as a visiting faculty member at the Fuqua School of Business at Duke University, the Helsinki School of Economics, the Bond University in Australia, and Tianjin Normal University.

Dr. Clifford E. Young is Emeritus Professor of Marketing and formerly Associate Dean of Infrastructure, IT and Budget at The Business School, University of Colorado - Denver. He received his B.S. in Physics from Colorado State University and his MBA and Ph.D. in Business from the University of Utah. Dr. Young's primary thrust is in the area of marketing research methodology, survey development, and research analysis. He also has experience in selling and sales deployment analysis.