

Digital Media Campaign Performance Analysis

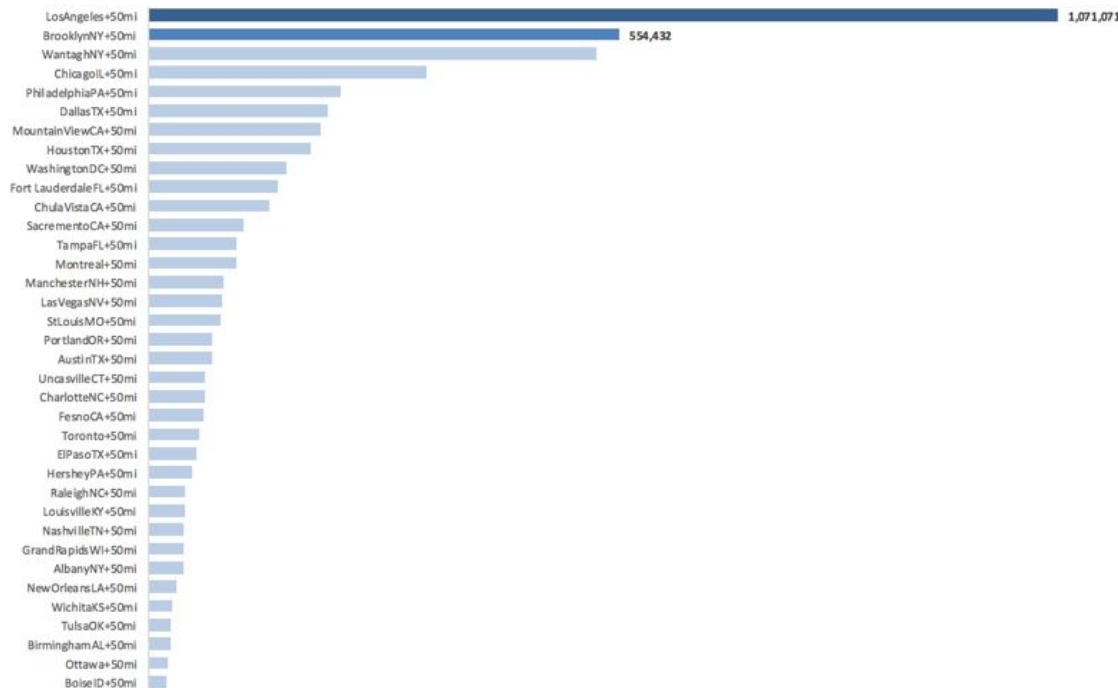
Runxi Wang

1. Annual Sale campaign got the highest CPM, while Concert Series got the lowest

The **Annual Sale campaign** gained more than 5.7 million impressions, the highest among five campaigns. But we also invested the largest amount of money (more than 73K USD) on the campaign. The overall CPM for Annual Sale campaign is **\$12.75**. More than 5.2 million impressions were driven by the Concert Series campaign, but it only cost less than 24K USD. This campaign got a CPM of **\$4.56**, which is the lowest. The Concert Series campaign is the most effective one in driving awareness among all the five campaigns.



2. LA and Brooklyn got the largest amount of impressions in Concert Series campaign



1M

Impressions
from LA

500k

Impressions
From Brooklyn

In the campaign, we created two ads targeting in Los Angeles + 50 miles, and each of them drove more than 500k impressions. LA brought in 1,071,071 impressions in total, which is the largest, followed by Brooklyn NY + 50 miles (554,432 impressions).

LA and NYC are two of the largest cities in the US, with large amount of internet users. In addition, these two cities also host a large amount of concerts and other art events.

3. Annual Sale Campaign attracted the highest number of pageviews per session

From the chart we can see the Annual Sale Campaign gained **3.54 pageviews per session**, the highest among five campaigns. It brought in 196,730 sessions and 696,516 pageviews, which are also the highest.



This is probably because:

- We invested the largest amount of money on the Annual Sales Campaign.
- We tried different creative tactics and optimization methods in this campaign, while the others are “Not Tested”.
- This campaign has the most specific audience categories.
- Also the campaign is about sales. The audience probably were more interested in exploring the website and viewing more pages.

4. The audience of All Site Traffic got the highest CTR



From the chart, we could see that the All Site Traffic - 10% Lookalike got the highest average click through rate in the Traffic Driving Campaign, which is 1.71%, followed by Loyalty Card Holders audience (1.51%). The Full Price Purchasers got the 1.35% CTR, which is the lowest.

5. Ad Variation 46 had the most effective CPC

\$817.12

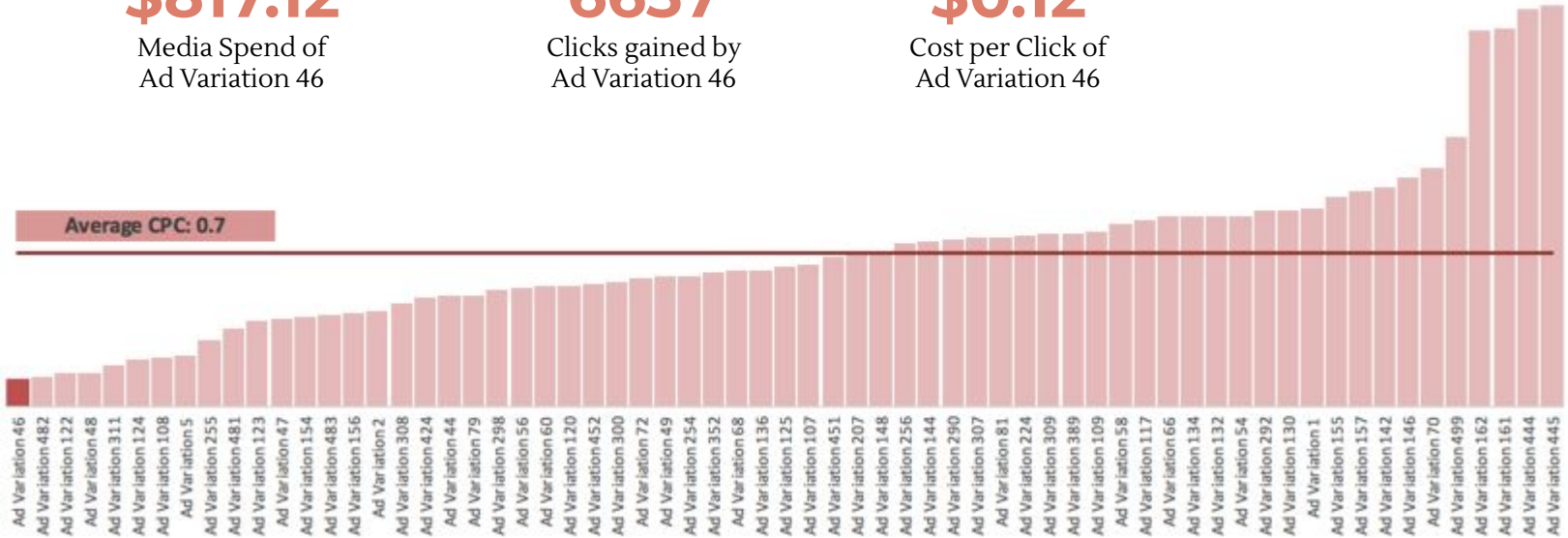
Media Spend of
Ad Variation 46

6637

Clicks gained by
Ad Variation 46

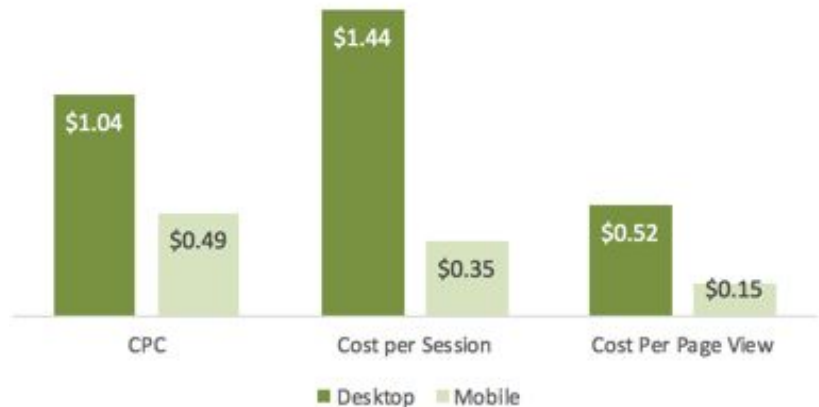
\$0.12

Cost per Click of
Ad Variation 46



The average media spend of Annual Sale Campaign is \$186.7. Among all the Ad Variations with media spending higher than \$186.7, the Ad Variation 46 had the lowest cost per click of \$0.12, which is 83% lower than the average CPC of the Annual Sale Campaign.

6. Mobile was more efficient in driving traffic in the Limited Edition Traffic Driving Campaign



As we can see from the chart on the left, Mobile ads gained clicks, sessions and page views more effectively. The CPC of desktop ads is 114% higher than the mobile, Cost per Session is 311% higher and Cost Per Page View is 248% higher.

The campaign invested more money on Mobile, which was a right decision to make the media spend more effective. In the next campaign, we could try to invest more on mobile.

	Total Clicks	Total Spend
Desktop	4,495	\$4,679.08
Mobile	14,669	\$7,146

Total Sessions	Total Pageviews	Total Spend
2,057	5,690	\$2,969.71
12,094	2,8354	\$4,251.53

7. The overall ROI of Annual Sale Campaign is 127.77%

127.77%

Overall ROI

The Annual Sale Campaign cost more than 73k dollars totally and gained a revenue of 166.7k dollars. The overall ROI of this campaign is 127.77%.

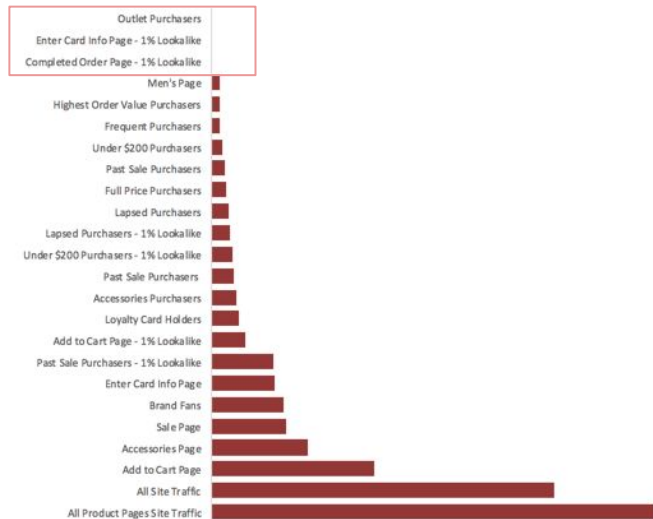
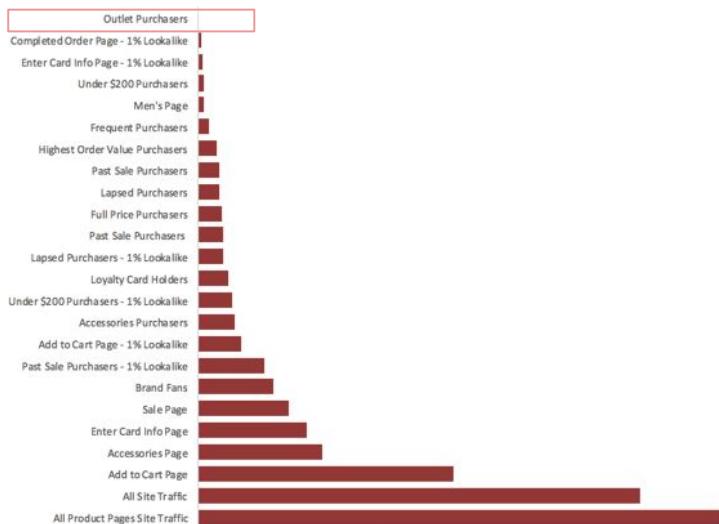
\$166,682

Total Revenue

\$73,180

Total Media Spend

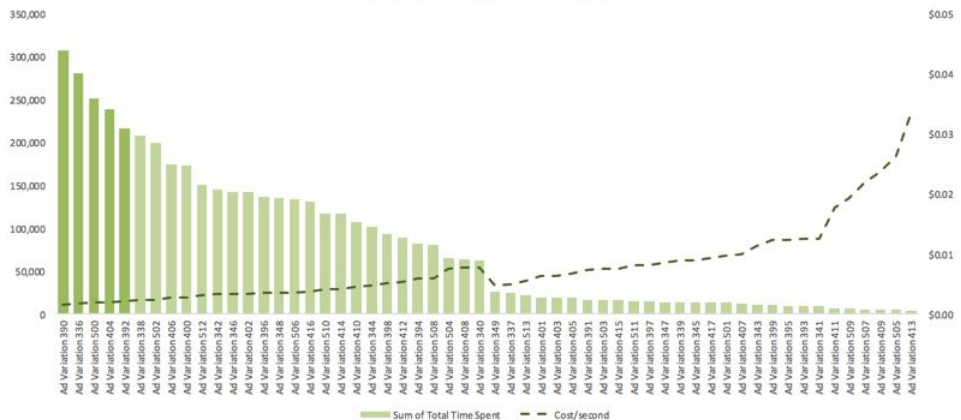
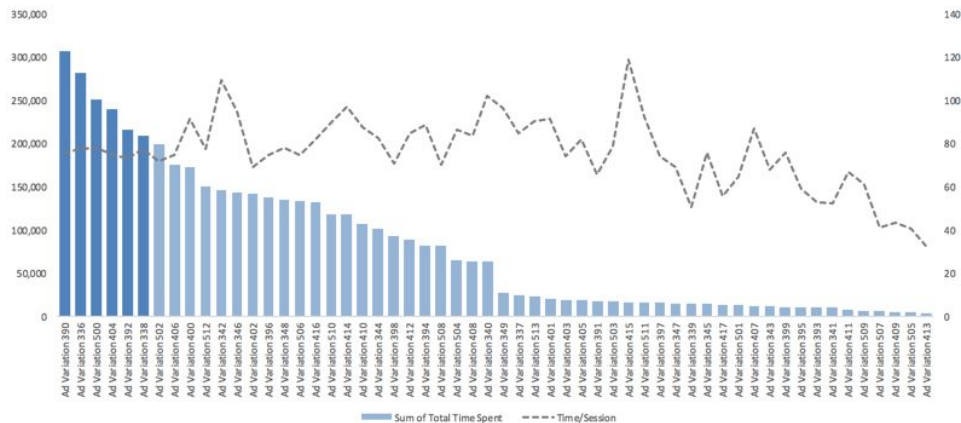
8. Outlet Purchasers didn't create any sales



The Outlet purchases didn't brought in any sales on Facebook or website. Audience from Completed Order Page - 1% Lookalike as well as Enter Card Info Page - 1% Lookalike didn't contribute to the sales on website either, but audience from these two groups put 2 and 3 orders on Facebook. This is probably due to:

- Media spend was quite low compared to other target audience groups, for example, the outlet purchasers only got an \$253.56. As a result, it only got about 30k impressions, which was also very small.
- In addition, for all the three groups of audience, neither Creative Tactics nor Optimization Method was tested. So the copies or images were probably not quite attractive.
- The audience, especially Outlet Purchasers probably don't have the habit to shop online.

9. Total Time Spent, Time per Session and Cost per Second are used to measure how efficiently an ad garners time on site.



To measure how efficiently an ad garners time on site in the Traffic Driving Campaign, I tried 3 metrics.

- **Total Time Spent:** how long a visitor stays on the website has long been considered a key indication of how successful that site is in attracting relevant visitors. Also the client cares about the time spent on site. From the table we could see that Ad 390 drove the longest time.
- **Time/Session:** this metrics calculates the average session duration. We expect each session could drive more seconds. From the table, Ad 342 gained the longest time/session.
- **Cost/Second:** a lower cost per second means the ad attracts time on site effectively. Ad 390 and Ad 336 are the most effective ads from this perspective.

10. Under \$200 Purchasers had the lowest average order value for the Annual Sale campaign

In the Annual Sale Campaign, the Under \$200 Purchasers got the lowest AOV (\$154, 23% lower than \$200.34 -- the overall Order Value of the campaign.) The low AOV is probably due to:

- The media spent on this group was \$462.99, only higher than the 2 groups that didn't brought in any sales. As a result, Under \$200 Purchasers only generated a revenue of \$924.
- Shopping habit of this group is buying low price products .
- The Ads were not tested, which probably didn't encourage customers to purchase more.



11. Further Reduction Image + 50% Off Copy is the most effective creative tactic in the Annual Sale campaign

Creative Tactics	Total Revenue	Total Spend	Overall ROI
Further Reductions Image + 50% Off Copy	4,169.00	2,843.80	46.60%
Brand Logo Image + 50% Off Copy	4,044.00	2,831.87	42.80%
Brand Logo Image Only	1,336.00	1,126.70	18.58%
Further Reductions Image + Shop Now Copy	3,195.50	2,695.85	18.53%
Further Reductions Image Only	1,239.00	1,357.26	-8.71%
Brand Logo Image + Shop Now Copy	1,983.50	2,598.75	-23.67%

Among the 6 creative tactics tried in the Annual Sale Campaign, the Further Reductions Image + 50% Off Copy got an ROI of 46.6%, which is the highest, followed by Brand Logo Image + 50% Off Copy, with an ROI of 42.80%. Further Reductions Image Only and Brand Logo Image + Shop Now Copy got negative ROIs.

In the Annual Sale campaign, the ad placement and optimization methods are quite similar. The huge differences of ROIs could probably due to :

- The 50% off copy was more attractive to customers than Image only and Shop Now Copy. Customers are interested in a sales message.
- The Image Only posts were photo posts rather than link posts, so audience didn't get a chance to click to the shop, while the posts with 50% Off Copies were Link Posts.
- The Brand Logo + Shop Now Copy sent the message out too directly.

12. Testing more Images and Copies to improve the ROI

From the data in last slide, we could see that the copies with 50% Off brought in higher order values, which suggests that the customers are interested in sales and promotions. We can try out more tactics in the next campaign:

Image: A good quality image attracts clicks	Copy: A good quality copy increases ROI
Product Image: No matter how well known the brand might be, it's the product that the customers are looking for.	Display a product's price: If the price is competitive enough, listing price can attract more customers.
Image with Call to Action: viewers will follow the image subject's line of sight and in such case, are more likely to read the ad copy.	Offer free shipping: words like free can immediately inspire users to take action, even if it's not a very big promotion.
	Mention available stock: Inform a user that the product might be gone unless they take action now.
Use People in Image: It's been established that pictures of real humans are more effective when it comes to conversions.	Offer a Time Limited Promotion: Everyone loves a good deal. But more people will act on a one with an expiry date.
	Use Urgency Evoking Phrases: limited time, only, hurry, last chance, today only, don't miss out, offer expires
Try Video Ads: videos are much easier to get views now. A larger amount of impressions could contribute to the ROI.	Use Trending topics in the copy
	Use Social Proof: if the customers find that there are others out there using it, and that they like the product

13. Custom Audiences, Website Custom Audiences, and Lookalikes

	Custom Audiences	Website Custom Audiences	Lookalikes
How to segment	A Custom Audience from a customer list is a type of audience you can create made up of your existing customers.	Custom Audiences from your website is a targeting option that matches people who visit your website with people on Facebook, using the Facebook pixel.	Lookalike Audiences are a way to reach new people who are likely to be interested in your business because they're similar to customers you care about (age, gender, or interests, etc.)
Benefits	<ul style="list-style-type: none">You have the information of this group of audience, so you can create Facebook campaigns targeted directly at them. In addition, they already show the interests in your product, so it's less risky to target at wrong people.FB Ads can support the email marketing by reaching the users who never open email.It helps to retarget at the audience to remind them to complete an action or turn trial-ers into customers.When using News Feed placements, you get the added bonus of your customers sharing that content with their friends on Facebook, amplifying the reach and impact.	<ul style="list-style-type: none">With Website Custom Audience, you can reach well beyond the core fans and email subscribers. Advisors can use it to build fan base, drive website traffic and grow email list and improve sales.Promote actions as a result of your website contentEncourage users back to your site if they didn't complete an enquiry or if they haven't visited in awhile.Recently, Facebook made an update and advisors can do advanced combinations – like targeting the amount of times people came to your site within a timeframe.	<ul style="list-style-type: none">Lookalike Audiences can be used for fan acquisition, site registration, off-Facebook purchases, coupon claims, and brand awareness.Lookalike audiences allow you to find a large amount of users that don't know you yet, but are very likely to become your customers.It's a great way to expand your reach and to drive new traffic to your website (which also helps build new members on your website Remarketing list)
	The true benefit of Custom and Lookalike Audiences is a potentially higher conversion rate. Custom audiences can be used to target the users on Facebook that are most likely to convert well, making your ad campaigns less expensive. Rather than targeting anyone and everyone, you can be selective about your campaigns and more careful with how you spend your money online.		

14. How to Optimize the Annual Sale Campaign for ROI.

01

Demographic: Test the ads for males

Because we didn't target in different age groups, we can only take a look at the genders. Most of the ads in the Annual Sale Campaign were targeting at Females (323), only 18% (68) targeted at Males. In addition, the female audience got a much higher investment (\$71099.91) and ROI. As we can see from the data, none of the ads for male got creative tactics and optimization methods, test, we could try some test to get a better ROI on males ads.

02

Placement: Increase the investment on Mobile

There were 198 ads on desktop, while 194 on mobile. However, the desktop got nearly 56k media spend, which was much higher than mobile (17k). **The ROI on mobile was 106%**, just slightly less than desktop (136%). According to [Internet Retailer](#), Mobile is still growing fast in e-commerce. To gain a better ROI, We could try to invest more on mobile.

03

Audience and Audience Type: Fans could contribute more to the ROI

- Fans got the lowest investment (3K) but gained **the second highest ROI (135%)**. From the data we could see that fans are the audience who could brought in revenue effectively. To optimize the campaign, we could invest more on this audience type, by doing creative and optimization test.
- For the Lookalike audience, nearly all audience groups got a low ROI. We are exploring new customers, so it's acceptable. But we could also do an A/B test to figure out a better way to target Lookalike audience.
- Some ads targeting at some audiences with very large amount of media spend were not tasted. For instance, among the ads targeting at the All Product Pages Site Traffic, ads with more than **16k** USD spend didn't get any creative tests. We could make better ROIs by testing them.

04

Creative Tactics: try new creative tactics & post more discount information.

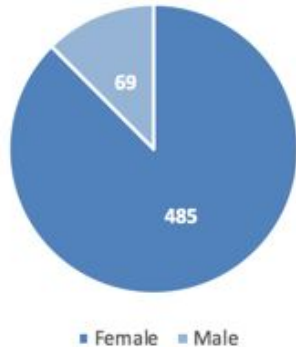
- In the campaign, **246 ads** didn't drive any sales. We could take a look at these posts, especially those ads attracting long on-site time and cost a large amount of money. We could test the copy, image, audience and website traffic to figure out the reason.
- We can test new creative tactics in slide 13 to make the ad design more variation.
- We could try some new optimization methods in the important to get a higher ROI.

15. Interesting Insights in the Dataset

72%

Campaigns targeted at female customers

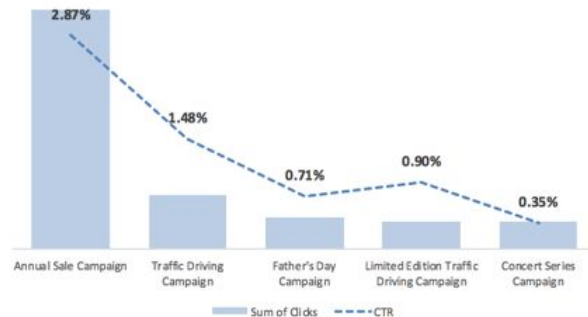
4 out of 5 campaigns only targeted at Female audiences, and the Annual Sales Campaign also focus on Female audience. The brand probably has a large group of female audience. But from the audience of Annual Sales campaign, we could tell that they did have products for males and could expand the male's market.



2.87%

Annual Sale Campaign got the highest CTR

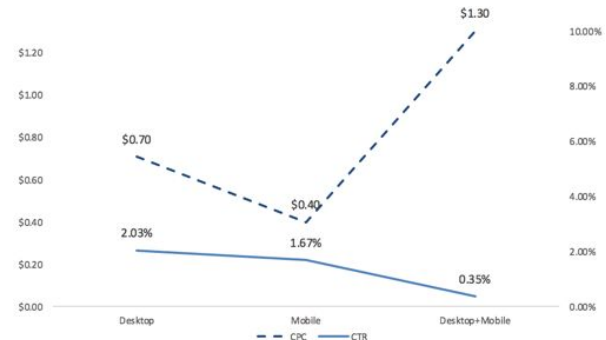
Among the 5 campaigns, Annual Sale campaign got the highest CTR. The campaign was effectively in driving clicks and traffic. The Father's Day campaign and Concert Series campaign got the lowest CTR.



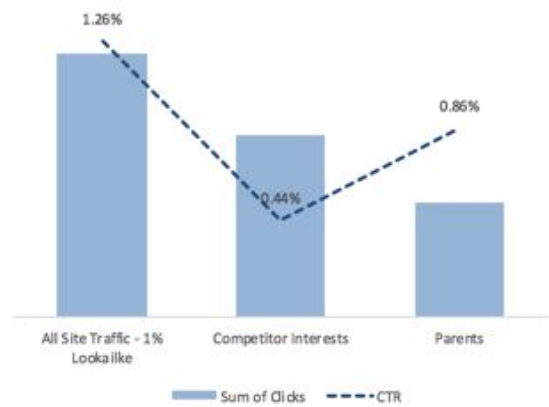
\$0.40

Mobile got the lowest CPC

Overall, in 5 campaigns, Mobile got a CPC of \$0.40, which is the highest in 5 campaigns. Mobile is driving clicks and traffic effectively. The Desktop + mobile placement was only used in the Concert Series Campaign, and got the lowest CTR and highest CPC. This suggests that the Mobile and Desktop ads need to be created separately.



15. Interesting Insights in the Dataset



In the Father's Day Campaign

All Site Traffic

Was the most effective audience in driving clicks. It got the highest CTR and click number, while the media spend and impression numbers were the lowest.

Age Group	24-45	18-65
Impression	1,858,186	280,779
Clicks	16,494	2,670
Media Spend	\$10582.53	\$1242.55
CPC	\$0.64	\$0.47
CTR	0.8876%	0.9509%

In the Limited Edition Traffic Driving Campaign

18-65

The 18-65 age group gained traffic more effectively. This campaign was the only one which targeting in different age groups. The age group 24-45 got more investment, but the CPC is higher and CTR is lower. The ago-targeting could be optimized.

Creative Tactics	Link	Photo	Multi-product
Impression	895,826	859,579	763,924
Clicks	11,657	3,075	22,620
Media Spend	\$7,258.89	\$4,849.47	\$4,830.11
CPC	\$0.62	\$1.56	\$0.21
CTR	1.30%	0.36%	2.96%

In the Traffic Driving Campaign

Multi-Product

Was the most effective post type in driving traffic. With the lowest media spend, it got the highest click number, with a CPC of \$0.21 and CTR of 2.96%. We could try multi-product ads more often in the campaigns in the future.

16. Several other variables could be tested

01

Demographic Variables

- Age Ranges: most of the age ranges in the data set is 18-65, which is really broad. I think more specific age ranges will make the targeting more effective.
- Audience's Interest, behavior and life stage: were used to target in Limited Edition and Father's Day campaigns, but we could also test these two variables in Annual Sales Campaign.
- Audience's Educational and Income Level: If we tested education and income levels, we could find out which group of audience could gain a higher ROI and then optimize the investment.
- Language: can help us to find out if we have a large group of audience speaking other languages.

02

Creative Tactics & Optimizations

- Ad Titles: in the dataset, we only get the information of image and copy, but we don't know what are the ad titles.
- Picture Colors: we could check if the background color has an influence on the CPC and ROI.
- Publishing and investing time: by testing this, we can figure out the best time to publish an ad on Facebook.
- Landing Pages: we can test different landing pages to get the data on ROI and bonus rate.
- Desktop News Feed and Right-Column Ads Separately: on desktop/laptop, there are two types of Facebook ads - News Feed and Right-Column Ads. We could test which one works better.

03

Other Variables

- The mobile device or operating systems: the iOS users and Android users, Mac users and PC users, they probably have different shopping habits.
- Key page views: now we only have the general pageview data. With the key page views, we could figure set the landing pages better.
- Registrations: the users who registered for a membership means they have a higher probability to come back.

A 3D rendered image of Calvin from the comic strip Calvin and Hobbes. He is a young boy with a large, round, bald head, small black eyes, and a small, downturned mouth. He has a small tuft of hair on the top of his head. He is wearing a yellow polo shirt. The background is a solid blue color.

Thanks

Appendix

1. What is the overall CPM for each campaign?	2. For the Concert Series campaign, which two geos had the largest amount of impressions served? Why do you think so?
3. Which campaign had the highest page views per session? Why do you think that is the case?	4. For the Traffic Driving Campaign, what audience has the highest CTR?
5. For the Annual Sale campaign, what ad variation has the most efficient CPC with above average media spend?	6. For the Limited Edition Traffic Driving Campaign, knowing that efficient site traffic is the goal, how would you allocate media spend by placement?
7. Join the Facebook Data to the Site Data and calculate the ROI for the Annual Sale Campaign.	8. Which audiences did not drive sales for the Annual Sale? Why do you think that was the case?
9. For the Traffic Driving Campaign, the client also cares about time on site. Which metric would you create to measure how efficiently an ad garners time on site. Explain.	10. What audience had the lowest average order value for the Annual Sale campaign? Why do you think that was the case?
11. Calculate ROI by creative tactic for the Annual Sale campaign, being sure to exclude the "Not Tested" bucket. Why do you think each creative tactic performed as it did?	12. Knowing the results from Question 11, what other types of copy points and imagery would you wish to test in this campaign, knowing that the ultimate goal is ROI? Why? [Please feel free to get creative here]
13. Research Custom Audiences, Website Custom Audiences, and Lookalikes. How are such segments created? What is the benefit of each?	14. Explain how you would optimize the Annual Sale campaign for ROI. Feel free to use all data columns at your disposal and back your rationales with data.
15. What other interesting insights did you find in the data that were not asked about? Please back your insights with data.	16. What variables were not tested in these campaigns that would have interested you?