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This image was found on a blog from a pawn shop that was outlining a small experiment they did. The experiment involved getting different offers and feedback from various pawnshops to compare and contrast the offers. For the first portion they took a gold ring, iPad, and diamond ring to 8 different pawn shops to see what they were willing to pay. Their graphic shows their findings. http://blog.pawnguru.com/2016/01/19/hidden-inequality-pawn-shops/

There are a couple of main problems that I identified with their visualization. One of the first things that caught my eye were the inconsistent bar sizes. The first bar is used to represent 100%, then second 200% and the third 1500%. However, the size increase of the bars is linear and doesn't match the numbers making it confusing. Second thing that I noticed was the ambiguous use of colors. The bars are alternating blue then green, but it's not clear if this is supposed to encode something (such as blue for the rings and green for the iPad), or if the colors were chosen because the creator thought they looked nice. Another use of color that is unclear is the use of yellow in the middle of the circled numbers. I would assume that it's supposed to represent the average offer, but there are 3 yellow circles in the last bar, two in the second and one in the first. I think the use of product images in the graphic doesn't help at all. Rings and iPads are extremely common items that the vast majority of people know about. Having them in the data visualization just adds unnecessary clutter and takes away from what they're trying show. Lastly, to show that there was a huge gap in the data points for the diamond ring they use ellipses. At first, I thought that they had omitted values because that's typically what ellipses are used for, but after emailing the author I found out that they were just there to show a big gap between the numbers. The fact that I had to email to author to figure this out means it's probably not being presented in the best way.

Deconstructing the original visualization

The visualization is measuring offers that were received by various pawn shops for three different items (gold ring, iPad and a diamond ring). The offers are measured in American dollars and its data type is quantitative-ratio. The difference between the lowest and highest offer is given as a percentage and this is also quantitative-ration.

The graphic tries to a use a couple of visual encodings. They attempt to use the height of bars to represent the difference in offer size (or variability, it is unclear) between the three items. It's possible that they wanted to use color to encode the types of items, such as blue for rings, and green for the iPad. However, the blue and green pattern are used all over so I am uncertain of what they were going for. Red was used to represent the lowest offer of each item and yellow seems to be used to show the average or middle offers. They used images of the actual items to represent each item, in addition to writing its name.

	Offer 1	Offer 2	Offer 3	Offer 4	Offer 5	Offer 6	Offer 7	Offer 8	Offer 9
Ring	0	0	0	0	25	35	40	50	-
Ipad	0	50	75	100	100	100	125	150	-
Diamond Ring	0	0	0	0	65	285	400	500	1060

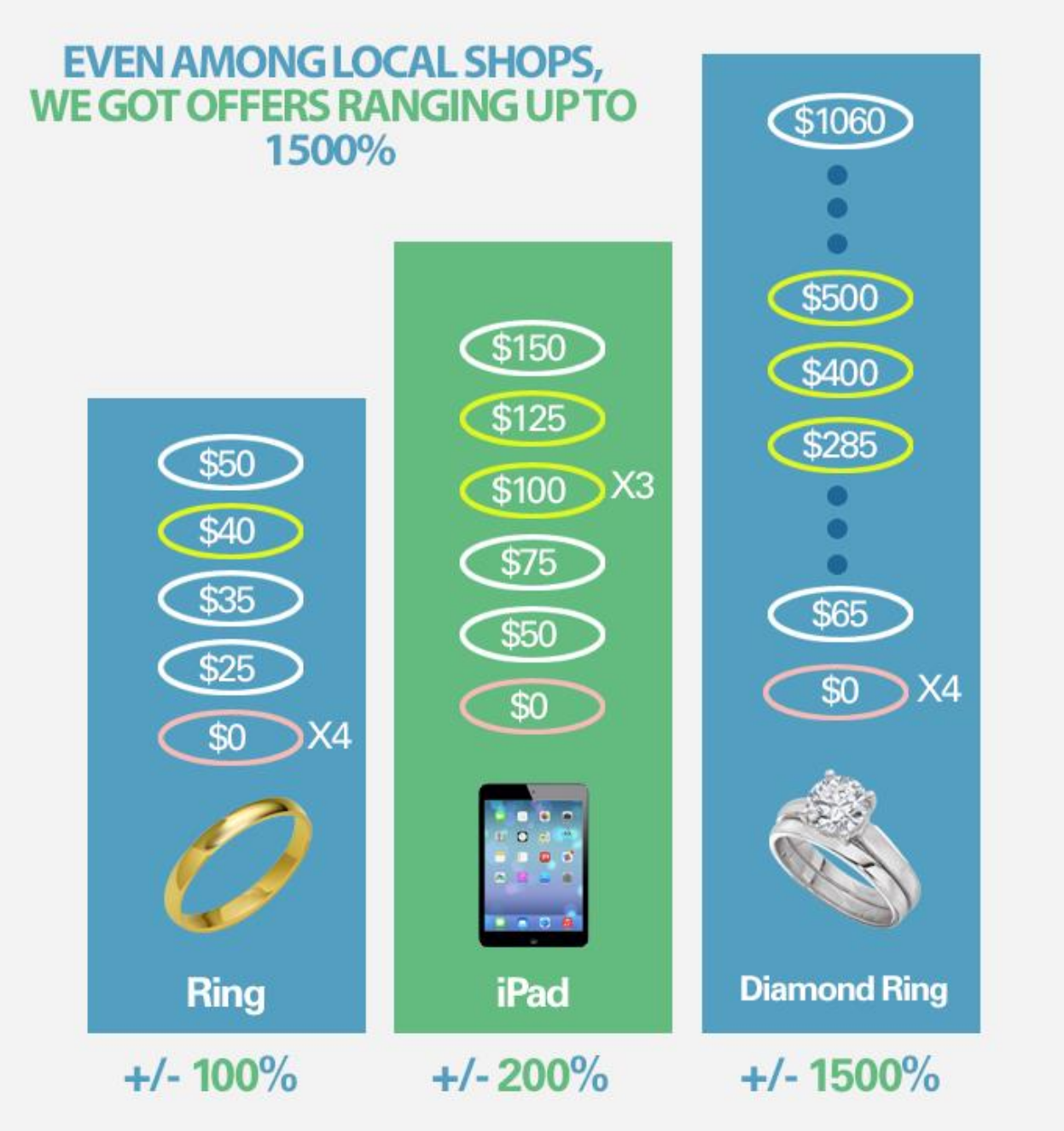
How to read the new visual

The new visual is fairly simple. I've split the data contained in the original into five separate charts. The first three charts show the offer size (and number of offers) of each item while the last two show how many shops were not willing to offer on each item and how much bigger the largest offer is compared to the smaller offer.

Decoding the new visual

Each item now has its own color. Green for the golden ring, purple for the iPad, and an orange-like color for the diamond ring. I've chosen three different and distinct colors so that it's extremely easy to distinguish between the items and to show that they separate entities. Next, because the scales on the first 3 charts are different, I've used size to help make this clear to the reader. As the chart size increases, as does the scale for each. When comparing the bar charts, I wanted to make the last one bigger because it carries more important data. The scatter plots are grouped together because they are showing the exact same type of data and while they are close, it makes it easy to compare the spread of points (which is what the original article was getting at).

Original


EVEN AMONG LOCAL SHOPS, WE GOT OFFERS RANGING UP TO 1500%
$50
$40
$35
$25
$0
X4
Ring
+/- 100%
$150
$125
$100
X3
$75
$50
$0
iPad
+/- 200%
$1060
$500
$400
$285
$65
$0
X4
Diamond Ring
+/- 1500%

New Visualization