Assuming Ordinality: Best-To-Worst Inferences in Vertical Lists

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This research shows that when presented with an unnumbered vertical list of items, consumers assume that these items have been ranked and listed in “best-to-worst” order of quality or performance. Across four experiments, we find that consumers infer ordinality from verticality even when explicitly informed that display order is non-diagnostic.

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EXTENDED ABSTRACT

When consumers are presented with a list of items, do they infer that the spatial presentation of the items conveys meaningful information about the items' relative quality or performance? Although prior research has detected presentation order effects (i.e., primacy and recency effects), most of this work has explored how people recall stimuli. In contrast, the present research examines comparative evaluations of items presented simultaneously within a vertical list, when no recall is necessary.

Limited research has examined how consumers use spatial position to make evaluations or choices from a simultaneously presented set of items. This work has found evidence for “edge avoidance” (Rubinstein, Tversky, and Heller, 1997), “centrality preferences” (Shaw et al., 2000), “middle bias” (e.g., Attali and Bar-Hillel, 2003), and a “center-stage effect” (Valenzuela and Raghubir, 2009). The basic finding from past research is that options in the middle of an array are evaluated more favourably (and chosen more often) than those on the edges. Although different mechanisms have been proposed for this effect, it may result from greater perceptual attention being devoted to options in the center of a choice set.

In contrast to edge avoidance (which has not been studied in the domain of vertical lists), we suggest that consumers who encounter vertical lists tend to assume that the items are rank-ordered from best to worst. Because vertical lists are routinely ordered in this way, consumers may overgeneralize this normative tendency and infer that even unordered lists have been arranged from best to worst. In a series of seven experiments (four of which are described here), we provide evidence that consumers infer ordinality from verticality. In addition to identifying a number of boundary conditions for this inference, we show that the presumption of ordinality is so ingrained that the best-to-worst inference may persist even if the provider of a list explicitly communicates that order is non-diagnostic (e.g., that the list is alphabetized, randomized, etc.).

In Experiment 1, we asked 166 online participants to review a list of ten brands that were supposedly the names of popular websites in a foreign country but were actually letter sequences fabricated by a website that generates “meaningless pseudowords.” The ten websites were presented simultaneously as a vertical list but were not numbered. Depending on condition, participants either received no explanation about how the websites were ordered or were informed that the websites were ordered alphabetically. Participants then estimated the relative popularity of the website that was listed second versus ninth from the top on a scale from -100 to +100, with positive values indicative of a best-to-worst inference. This mean relative popularity rating was higher when no explanation about order was given (M = +30.10) than when the list was alphabetized (M = +9.24); t(164) = 3.20, p < .01. However, mean ratings were significantly higher than zero in both conditions, suggesting that consumers made a best-to-worst inference even when they had been explicitly informed that display order was non-diagnostic.

If consumers infer ordinality from vertical position, then they should believe that the evaluative distance between two items is greater when their vertical positions are distant (vs. proximal). We tested this in Experiment 2 by showing 158 consumers an unnumbered list of the best places to work that included nine foreign companies (actually pseudowords) that were shown “in no particular order.” In one condition, a specific company was listed first (from the top) whereas the same company was listed eighth in another condition. Subsequently, participants provided a relative rating of this company versus the company that was listed ninth (again on a scale from -100 to +100). As predicted, the mean relative rating was higher when the two companies were apart in terms of vertical position (i.e., two versus nine) (M = +12.25) versus when they were adjacent (i.e., eight versus nine) (M = +5.1); t(156) = 2.58, p = .01.

Experiment 3 aimed to show that the best-to-worst inference arises because of consumers’ normative expectations about how vertical lists are arranged. A total of 226 participants were exposed to a series of best-to-worst lists (i.e., lists that go from 1 to 10) or to a series of worst-to-best lists (i.e., lists that go from 10 to 1). Following this task, which manipulated participants’ normative expectations, they were presented with the same unnumbered list as in Experiment 1 and estimated the relative popularity of the website that was listed second versus ninth. The mean relative popularity rating was higher after exposure to the best-to-worst lists (M = +29.49) versus the worst-to-best lists (M = -2.85); t(224) = 7.60, p < .001. However, whereas the mean rating was significantly higher than zero in the best-to-worst norm condition, this was not the case in the worst-to-best norm condition. This suggests that consumers’ propensity to make best-to-worst inferences when encountering a vertical list is driven by communication norms. More specifically, consumers overgeneralize the tendency of lists to be ordered from best-to-worst and apply this heuristic to lists in which order has not been unspecified. However, when the best-to-worst norm is weakened (through repeated exposures to worst-to-best lists), the effect is attenuated.

Finally, in Experiment 4, we found that the best-to-worst inference is stronger for unordered vertical lists than for unordered horizontal lists. A total of 233 participants encountered an unnumbered list of ten websites, shown in “no particular order,” that were either arranged vertically or horizontally. They then provided a relative evaluation of the website that was listed second versus ninth (either from top-to-bottom, or left-to-right, depending on condition) on a 10-point scale (higher numbers indicating a best-to-worst inference). The mean relative rating was higher when the list was vertical (M = 4.92) versus when the list was horizontal (M = 4.37); t(231) = 1.93, p = .05.

In sum, this research extends our theoretical understanding of serial position effects by focusing on evaluations rather than recall and by demonstrating the dominance of “best-to-worst” inferences over edge avoidance in the domain of vertical lists.

REFERENCES