

von Restorff Effect

A phenomenon of memory in which noticeably different things are more likely to be recalled than common things.¹

The von Restorff effect is the increased likelihood of remembering unique or distinctive events or objects versus those that are common. The von Restorff effect is primarily the result of the increased attention given to the distinctive items in a set, where a set may be a list of words, a number of objects, a sequence of events, or the names and faces of people. The von Restorff effect occurs when there is a *difference in context* (i.e., a stimulus is different from surrounding stimuli) or a *difference in experience* (i.e., a stimulus is different from experiences in memory).²

Differences in context occur when something is noticeably different from other things in the same set or context. For example, in trying to recall a list of characters such as *EZQL4PMBI*, people will have heightened recall for the *4* because it is the only number in the sequence—compare the relative difficulty of recall of the *4* to the *T* in a similar list, *EZQLTPMBI*. The difference between the *4* and the text characters makes the *4* more memorable than the *T*. Differences in context of this type explain why unique brands, distinctive packaging, and unusual advertising campaigns are used to promote brand recognition and product sales—i.e., difference attracts attention and is better remembered.

Differences in experience occur when something is noticeably different from past experience. For example, people often remember major events in their life, such as their first day of college or their first day at a new job. Differences in experience also apply to things like atypical words and faces. Unique words and faces are better remembered than typical words and faces.³

Take advantage of the von Restorff effect by highlighting key elements in a presentation or design (e.g., bold text). If everything is highlighted, then nothing is highlighted, so apply the technique sparingly. Since recall for the middle items in a list or sequence is weaker than items at the beginning or end of a list, consider using the von Restorff effect to boost recall for the middle items. Unusual words, sentence constructions, and images are better remembered than their more typical counterparts, and should be considered to improve interestingness and recall.

See also Highlighting, Serial Position Effects, and Threat Detection.

¹ Also known as the *isolation effect* and *novelty effect*.

² The seminal work on the von Restorff effect is “Analyse von Vorgängen in Spurenfeld. I. Über die Wirkung von Bereichsbildung im Spurenfeld” [Analysis of Processes in the Memory Trace: On the Effect of Region-Formation on the Memory Trace] by Hedwig von Restorff, *Psychologische Forschung*, 1933, vol. 18, p. 299–342.

³ Unusual words with unusual spellings are found in abundance in the Harry Potter books of J. K. Rowling, and are among the frequently cited reasons for their popularity with children.

Items in the middle of a list or a sequence are harder to remember than items at the beginning or end. However, the middle items can be made more memorable if they are different from other items in the set.

Word List
milk
eggs
bread
lettuce
butter
flour
ostrich
orangutan
penguin
cheese
sugar
ice cream
oranges
apples
coffee

The unique paint schemes on certain Southwest Airlines planes are very distinct and memorable. The paint schemes differentiate Southwest Airlines from their competitors, promote vacation destinations and partners, and reinforce their reputation as a fun, people-centered airline. This is a photograph of the Shamu One, a Southwest Airlines Boeing 737.



The Chick-fil-A billboards use a combination of dimensionality and humor to attract attention and increase memorability. The billboards effectively command attention in

visually noisy environments, clearly and intelligently promote the Chick-fil-A brand, and are quickly read and understood. As billboard design goes, it does not get much better.

