

# Improving the Store Environment: Do Olfactory Cues Affect Evaluation and Behaviour.

Research conducted and evaluated by  
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## Spangenberg Report Summary:

Objective: To determine the effects of Ambient Scent in a retail environment.  
Duration: Twenty weeks, early 1996.

## Subjects and Procedure

Subjects were 298 students (46% female) recruited from undergraduate business classes at a large university, randomly assigned to one of thirteen conditions. One unscented and twelve scented conditions consisting of two neutral and two positive scents diffused at either low, moderate or high intensities. The scents chosen (lavender, ginger, spearmint and orange) were particularly unrelated to any item in the simulated store. The store theme "one stop shopping" contained non-floral plants, calendars, kitchen items, books, clothing, decor items and athletic gear. The subjects were told that the questionnaire provided to them was to determine the benefit of a retail store such as this proposed for near the university. Armed with the questionnaire, the subjects were invited to explore the store at their own pace while a lab assistant secretly recorded their movements from behind a one way mirror. The completed questionnaires and observations were compiled and applied to the Manover over-all F-test with statistically significant results in all areas in favour of the scented stores.

## Applied Dependent Measures

Evaluation of the store. IE; bad/good, outdated/modern. 14-points  
Evaluation of the store environment. IE; unpleasant/pleasant. 7-points  
Evaluation of the merchandise. IE; inadequate/adequate, bad/good. 7-points  
Evaluation of specific products. IE; low/high quality, poor value/good value. 7-point  
Intention to visit the store. IE; unlikely/likely. 7-points  
Purchase intentions for specific products. IE; very unlikely/very likely. 7-points  
Actual vs. perceived time spent in the store. Best guess without looking at your watch  
Number of products examined. Hanging price tags moved.

## Conclusion

The research showed a significant difference in evaluation of, and behaviors in, a scented store environment vis-à-vis an unscented store despite no other changes. Scents that are at least neutral were found to produce enhanced perceptions; the specific scent used did not matter as much as the presence of the scent.

The subject customers importantly perceived the scented store to be of higher quality in surroundings and merchandise with a heightened awareness in specific products and distinct purchase intentions. Of considerable interest was the finding that subjects in the no scent condition perceived having spent significantly more time in the store than they actually had. Suggesting that the time consumers spend examining merchandise, waiting in lines or waiting for help can be made to feel shorter by introducing an ambient scent.