Grossman and Till (1998) performed two experiments to test the long-term effects of classical conditioning. The purpose of the study was to determine whether or not classically conditioned brand attitudes endured in the absence of an extinction process. The researches used a between-subjects and within-subjects design to test each of two hypotheses. The first hypothesis is simply that subjects exposed to repeated pairings of a positive US and a CS will respond to the CS will more positive attitudes than those in a control group. The second hypothesis is that the attitudes set forth will persist over time.

 In the first experiment, using a within-subjects design, Grossman and Till (1998) set up an experiment in which a fictitious mouth wash, Garra, (the CS) was paired six times with a favorable scene (the US), which was previously determined favorable by the test subjects, ( to the experimental group. The experimental group also saw 18 other pairings of filler brands with neutral scenes. Each pairing consisted of exposure for four seconds to the CS, then the US, then the CS superimposed on the US, and then a blank screen. The control group was exposed to random pairings of the same stimuli and products as the experimental group. However, pairings consisting of Garra with favorable scenes from the experimental were not shown together. Attitudes for both groups were measured using a variety of scales—a semantic scale (good/bad, high quality/low quality, like very much/dislike very much, superior/inferior, attractive/unattractive, pleasant/unpleasant, interesting/boring), an affect scale, a scale to rate the chance that the person would purchase the mouthwash (Garra) in the future, and an overall ranking from “very positive” to “very negative.” The questionnaires were repeated immediately following, one week after, and three weeks after the study.

 In a second experiment, a between-subjects design was used to test the relative persistence of the classically conditioned attitudes. There was still a control group but two experimental groups—one group which was surveyed immediately after exposure to conditioning and one group that was surveyed three weeks after conditioning. The procedure from the experimental group in the first study was used for both groups in the second study. All participants in the second study were conditioned, but the variable was the length of delay before being questioned (to determine attitude). Those in the immediate condition were asked the survey questions immediately and unrelated questions after three weeks. Those in the three week delay group were asked unrelated questions immediately and the “real” questions after three weeks.

 The results of the first experiment supported both hypotheses in that the subjects had a more positive attitude toward the mouthwash than toward the other products to which they were exposed and the positive attitudes persisted significantly after one and three weeks. The second experiment also supported both hypotheses in that the both groups had positive attitudes toward the mouthwash whether they were surveyed immediately or three weeks later. All results were determined to be statistically significant (Grossman and Till 1998).

 The experimental design used was very strong. Consideration was given to the possibility of demand characteristics. The second study used a between-subjects approach to eliminate the possibility that the results obtained in Study 1 were a result of people learning or remembering the previous results. The result of positive attitudes at both times by different groups gave good support to the conclusion that classically conditioned attitudes persist over time.

 One possible point of improvement for the study could be to show the subjects the picture of the mouthwash to which they were previously exposed when surveying their attitudes. Considering that the practical application of the study was purchase behavior based on classically condition attitudes toward a product, seeing the product might have provoked a stronger response than simply asking about the name. On the other hand, this could have lead to extinction in Study 1 since the same subjects would have been exposed to the CS alone on more than one occasion (at one week and three weeks after the study).

 Overall, this study did a good job of showing that classically conditioned attitudes toward a product can persist over time. There are obviously practical applications in advertising for the results of this study. As was noted in the discussion, this not only suggests that these associations can last, but also that the associations can last without reinforcement and with little conscious investment by the subject (Grossman and Till 1998). These are obvious advantages for an advertiser to consider.

References

Grossman, R.P., and B.D. Till. 1998. The persistence of classically conditioned brand

 attitudes. Journal of Advertising 27(1):32-43.