

# Harvey Prince & Co.

## THE WORLD'S FIRST ANTI-AGE PERFUME



*Precious .*

*New .*

*Enchanting .*

*Exclusively ours .*

*A Dramatically Different Anti-Age Perfume*

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*pink grapefruit, mango, anti-oxidant rich pomegranate, jasmine and musk.*

**NOTE:**  
**THIS STUDY WAS COMPLETED in AUGUST 2008.**  
**IT INVOLVED 75 MEN. THE PARTICIPANTS WERE DIVIDED IN 5 GROUPS**  
**BASED ON THEIR AGE.**

**ANOTHER STUDY PRECEDED THIS ONE IN DECEMBER 2007. IT WAS**  
**INFORMAL AND 52 PARTICIPANTS WERE TESTED. THE RESULTS WERE**  
**SIMILAR. HOWEVER THE FIRST STUDY WAS INFORMAL AND NOT DONE BY**  
**AN INDEPENDENT ORGANIZATION. SO THE RESULTS OF THE STUDY ARE**  
**NOT REPORTED IN THIS PAPER.**

World's First Anti-Age Perfume®

## Scent and Age: A Survey of Seminal Studies and Compilation of Research on the Correlation of Scent to Perceived Age

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### I. Study Links Smell to Age



Various studies from as early as 1974 have attempted to determine the key components of human body odor. Results of these studies have shown human body odor to be caused by various substances in various degrees formed by various mechanisms (Ellin *et al*, 1974; Kanda *et al*, 1990; Zeng *et al*, 1991; Bernier *et al*, 2000). It has also long been known that certain behaviors and even hereditary features (gender, disease, etc.) affect body odor (Labows *et al*, 1979; Zeng *et al*, 1991). Further, certain odors have been associated with certain age groups such as babies, young people and seniors.

In December of 2000, the Journal of Investigative Dermatology accepted for publication a study that took the next step in the study of human body odor and age, by not just categorizing the differences in substance or amount of substance, but tracing how those differences change as a person ages.

The study involved 22 subjects, 13 of which were male and 9 female, and ranging in age from 26 to 75. Collections were made and analyzed using headspace gas chromatography and mass spectrometry to determine the kinds and levels of odor causing compounds each subject produced. The subjects were divided into two groups, those less than age 40 and those over age 40.

The results of the study determined that subjects in the older group (age 40-75) had more than twice the amount of 2-Nonenal (an unsaturated aldehyde with an unpleasant, greasy and grassy odor) than the under 40 group. The study also found an increase in Omega 7 monounsaturated fatty acids and lipid peroxides in the same group. This finding led the team to conclude that the presence of these substances is related to age, and that in fact they increase with age. Therefore, one inescapable conclusion from these studies is that body odor increases with age.

The importance of this study can hardly be overstated. As fragrance producers understand the importance of aging and human odor production, they will be able to produce whole new lines of product targeted at markets outside of adolescents and young adults. More work was needed to determine what fragrances mask or counteract the "odor of aging."

## II. Attempts to Mask the Odor of Aging

The commercial value of perceived youth led Shiseido Company, Japan's largest cosmetics producer, to develop a series of products designed to chemically suppress this "odor of aging." Shiseido spun off another company. Beauty Technology Company was founded in July of 1999 to handle consumer demands by senior citizens.

Can fragrance cover the odor of aging? Certainly. Can fragrance cause a person to not just smell better but smell younger? If scent can do more than just cover by adding pleasant fragrance, but can also subtract perceived years from a person, then properly developed fragrances would fall in the realm of success stories like Viagra and Botox rather than becoming just another fabulous "Fountain of Youth" and at a much more accessible price.

The power of scent was then shown to be, not just effective as a masking agent, but also able to actually change the perceived age of the subject, in the case of at least one fragrance, grapefruit. But are there other essences that have the same or similar effects? Can compound fragrances compound the effects?

What follows is a compilation and analysis of questionnaires regarding perceptions and preferences of a variety of fragrances. Seventy Five men in each of five age groups were asked the questions that follow. The ages were broken down as ages 20-30, 30-40, 40-50, 50-60 and 60 plus.



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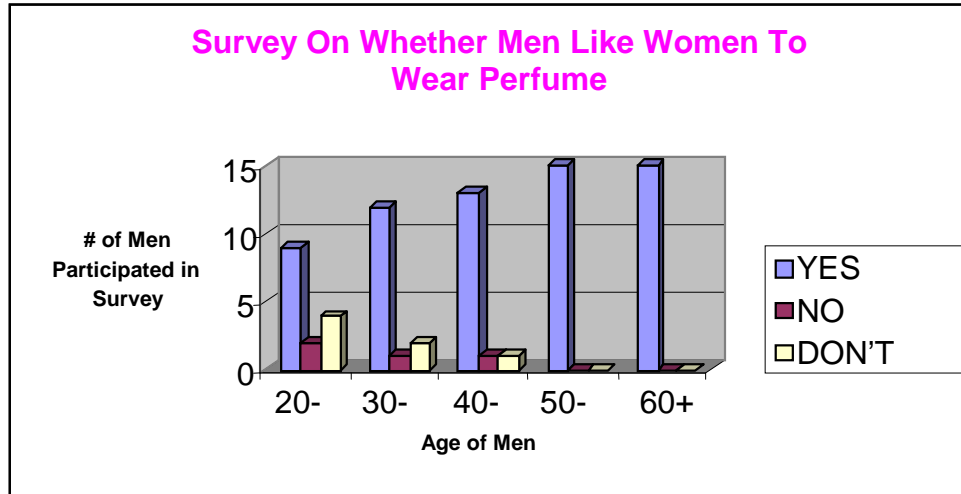
### III. Compilation of Research Questionnaires

The same aromas were offered to seventy five men in each age group and the men were asked:



#### A. Do You Like a Woman to Wear Perfume?

Far and away, men like women to wear perfume. Of the seventy five men questioned, the majority answered yes to this question regardless of age. The lowest number came from the youngest group, ages 20-30 that also had the highest incidence of ambivalence and the most no's. Each category in between had a preference for women to wear perfume, but in the age group 60+ fifteen of fifteen men liked a woman to wear perfume. This result corresponds with the increase in nonenal in seniors and may indicate a subconscious response to higher production of human body odor in the age group. The younger group, on the other hand, does not produce the amount of nonenal and therefore does not produce the response of males to want them to wear a fragrance.



### B. Does this Fragrance Suggest a Particular Lifestyle?

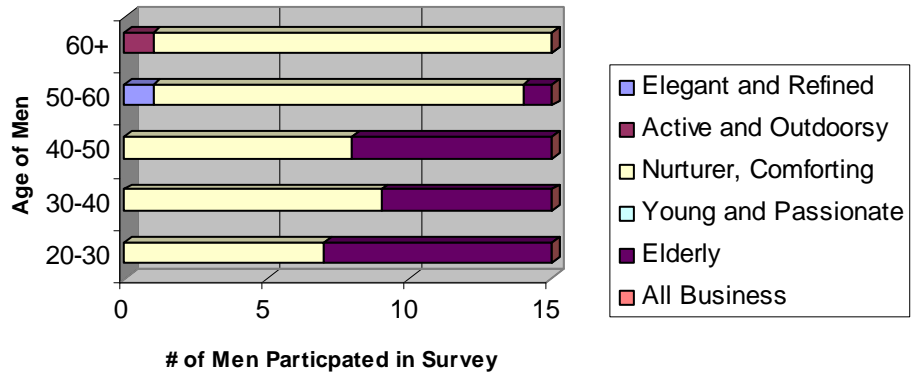
Next, the interviewees were asked if the particular essences suggested a particular lifestyle. The scores from the seventy five men studied varied, depending on the scent.

Patchouli, for instance, scored two's and threes across the board signaling no strong indicator of lifestyle at all in the perception of those studied. Other scents elicited more specific responses. Vanilla scored high as giving the impression of nurturer, comforting and the responses were generally greater with age.

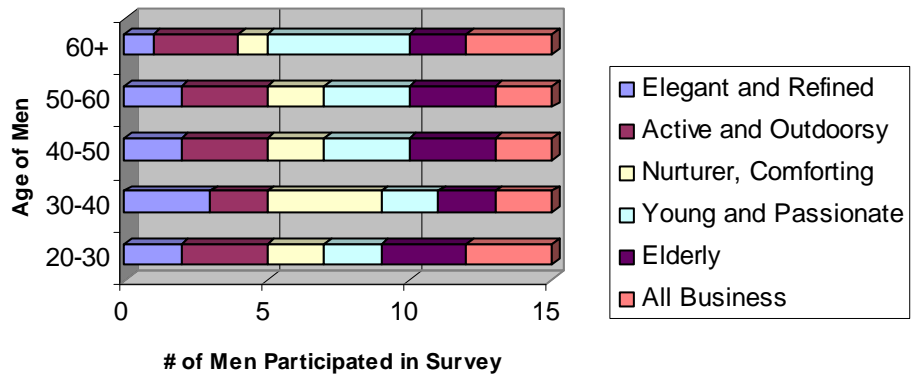
The target perfume, however, scored the highest overall impression scores and did so in one particular category, "young and passionate". This indicates that the target perfume elicited a very specific response and that response was particularly that of youth and passion. The highest score for this response was in the 60+ age group.

In the case of the target perfume, the opposite was also the case. This was the only fragrance that had zeros across the board for all age groups in suggesting the wearer was elderly. This is further evidence that scent actually suggests age and the target perfume performed more than admirably, which suggests a compounding effect of properly proportioned essences.

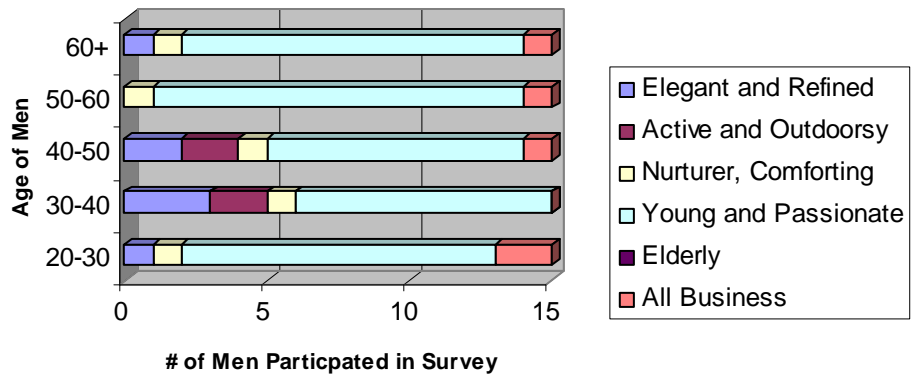
### Fragrance and Lifestyle: Vanilla



### Fragrance and Lifestyle: Patchoulli



### Fragrance and Lifestyle: Target Perfume



## Does this Fragrance Affect Your Mood or Emotion?

Consistent with the psychological power of scent, every interviewee in every age group said that each aroma did in fact affect their mood. Only vanilla, Patchouli, lavender, and blueberry elicited any feelings of depression, and these only in very small numbers, most notably, broccoli, which had at least one such reaction in each age group. The highest rate of mood depression was only two overall.

Generally, the perfumes made people feel erotic, comforted, or playful. Soft, earthy fragrances like vanilla, lavender, rose, and fruit and vegetable essences like blueberry, apple, carrot, broccoli, and spinach made high numbers of interviewees in all age groups sense comfort. However, the sense of comfort also was strongly felt when interviewees smelled cinnamon and ginger.

Other, more spicy or minty aromas like Patchouli (a member of the mint family), Jasmine, and musk elicited an erotic response. Playfulness scored fairly evenly across the age groups and aromas. Most scores were 5 plus or minus one representing one third of interviewees for aromas where "depressing" was not chosen. This is perhaps due to the fact that playfulness is more difficult to define than erotic or comforting and perhaps resulted in a bit of ambivalence in the findings.

Overall, perfumes scoring strongly across all of the positive moods (dropping out the lowest and highest scores yielding 5 plus or minus 1) and getting no votes for depressing were; target perfume, sandalwood, cinnamon, spinach, and ylang ylang.

## D. Does this Fragrance Describe a Personality?

The seventy five men were asked whether the battery of perfumes described a specific personality. The most difficult personality to score high in was, by far, "young and active" and it is important to note that grapefruit was *not* one of the aromas offered in this study. It would be enlightening if another scent elicited perception of a young and active personality and to a small degree, apple and jasmine accomplished that.

Aside from those two aromas, all the other aromas fell into one of two categories at the junction between the 40-60+ group and feeling young and active. All but one of the other essences fell completely flat in reminding interviewees of youth and vigor. Musk, blueberry, and carrot were the highest scorers across all age groups and had at most 3 interviewees for whom the aroma reminded them of youth and vigor. All others scored, at most, one for the category in any age group.

One aroma, the target perfume, scored extremely high for young and active across all age groups. For 20-60+ year olds, as many as 13 of the fifteen men said that target perfume made them think of youthful, vigorous personality. This is especially notable in the 40-60+age range where the target perfume made 10, 12, and 11 of the men sense a youthful and vigorous

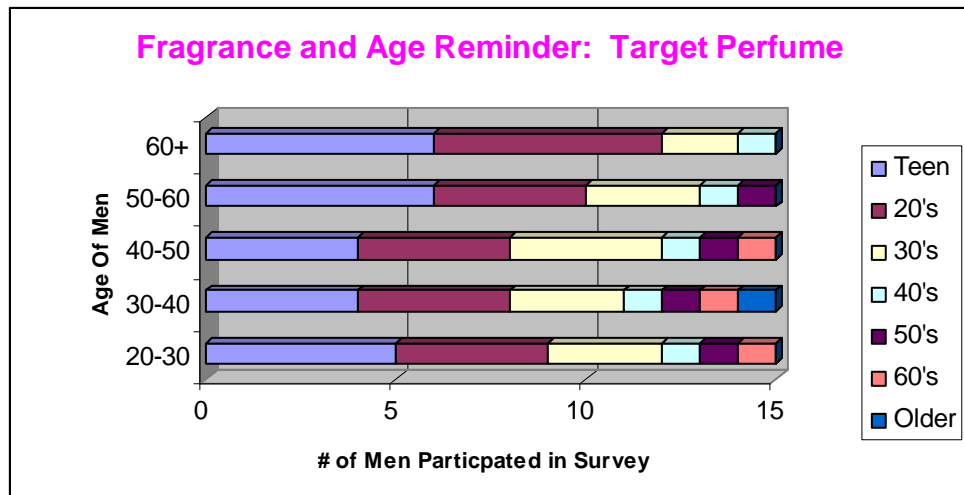
personality. None of the other aromas came close to the kind of success that target perfume had in eliciting thoughts of a youthful and vigorous personality.

### E. Does this Fragrance Remind You of a Certain Age?

The most straightforward question of the series, as pertains to scent and aging, was then asked of the participants. Does this fragrance remind you of a certain age?

Some of the results from the single source aromas were to be expected, for example, rose fragrance reminded men of higher ages or older people. Rose fragrance did not get more than two responses for any age group through the 40's and scored zero responses that it reminded men of a teen. Apple fragrance, on the other hand, got up to six responses of teen, twenties, and thirties and then dropped off precipitously at 40's, with only two respondents of sixty saying apple fragrance brought to mind an age of sixty or older.

The other fragrance that reminded men strongly of youth was the target perfume. In fact, the target perfume outperformed or tied the next closest competitor (apple) in every age group of participant for responses teen, 20's, and 30's in all but all but four of the twelve possible responses. The following chart shows the youth-heavy responses by the participants to the target perfume:



### The Chemistry of Attraction

Youth and attraction go hand in hand and according to longstanding research, both are tied to an organ receptor called the vomeronasal organ (VNO) that detects trace amounts of chemicals called pheromones and stimulate the limbic region of the brain. The limbic region, in turn, is the seat of emotion and passionate desires. Fragrances that take advantage of this potent effect can move people in a very powerful way. Many fragrance producers work depends on them

being able to tap into these deep human responses. Producing fragrances with such potent effect is far from simple, as the message sent by a specific fragrance does not necessarily depend only on it smelling good. In truth, some very good smells elicit no emotional response whatsoever. Much research must be done to cull out the impotent fragrances and put together potent ones in the proper proportions to that through synergy, the greatest response is observed. The difficulty in formulating potent fragrances that take advantage of such synergy, coupled with the almost magical ability of potent fragrances to make one attractive to the other sex have resulted in fragrance production being called a "high art form."

The attraction elicited by fragrance does not necessarily manifest itself at the conscious level. In fact, the VNO receives information at levels too low for conscious recognition but stimulates the limbic region at a very high level. This level has been described as "pre-attentive". According to a study done by the Sense of Smell Institute:

*"There is an increasing body of evidence that humans produce and detect various odors that give information about genetics, health, and mood. When someone chooses a fragrance they may be enhancing the message that they want to send about themselves whether it is about their mood, their romantic intent, or even their health. This fragrance message – this fragment of the perceived world - can lead others to look for confirming cues at a pre-attentive level."*



In metaphorical terms, the study describes fragrance as a biological "search engine" by which we sort the world around us. When a fragrance for a particular mood or emotion is sensed, we pursue the manifestation of that mood - the fragrance puts us in motion. If our ensuing search yields experiences that match the mood, the fragrance is locked into our subconscious memory and easily recalled whenever it is encountered again. If there is no event correspondence to the emotion, then the fragrance is automatically dismissed so that it does not confuse in the future.

People exposed to floral essences at a peri-threshold (just below detection) level used more emotion words signaling that at a subconscious level they were reminded of emotions and in turn sought to relive those emotions and/or experiences. The floral aromas create a substance that is similar to human pheromones. Again, to quote the study:

*"It is possible that some floral odors contain "phyto-pheromones" that could mimic human pheromones and communicate emotional and social information. Plants are chemical factories that produce many such mimics for a wide variety of species. Many floral fragrances (and fine fragrances as well) may carry information in modes similar to pheromones, which are a chemical means of communication within a species.)"*

Floral aromas created more emotional responses and these emotions were positive in nature. In one study flowers given to women elicited a true (Duchenne) smile and had the effect of producing positive emotions three days after the gift was given. Flowers given to people on elevators had more positive responses than other items and flowers given to the elderly were even shown to enhance long-term memory.

Positive mood has a decided effect on people's social lives. The progression can be seen as follows:

Positive emotion makes people appear more sexually attractive and more likely to be approached socially.

Fragrance, by increasing positive mood may effect the attractiveness of an individual in a positive way.

The resultant positive mood effects are seen in the short and the long term.

Positive mood improves the memory and offsets stress.

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## V. Conclusion to Research

Scientific studies have shown that as people age, particularly from their forties on, they create many times more body odor producing substances than they did when they were young. The result is a situation that is unpleasant for seniors and those who live and/or work in close proximity to them. This phenomenon has been called the "odor of aging" and companies have worked to produce various perfumes to cover or mask it.

Further, groundbreaking studies have shown that certain aromas not only cover the "odor of aging," but also cause a psychological response in people that changes their actual *perception* of the person they see, as they smell the aroma. Grapefruit was most closely studied and showed the most promise as a stand-alone fragrance. But apple fragrance also has here been shown to remind people of youth.

It appears from the data here that the target perfume in some way captured and compounded the potency of multiple fragrances in ratios that magnified its affect. The result was a product that could cover and mask, and could also elicit the response and impression of youth, but did so in a far more powerful way than any one fragrance alone.

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