

“Say it with Flowers”...to Female Drivers: Hitchhikers Holding Flowers and Driver Behavior

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Research has found that flowers are associated with positive emotions. French motorists, both male and female ($N = 2000$) were tested in a hitchhiking situation. Five male and female confederates in their early twenties posed as hitchhikers either empty-handed or holding flowers in one hand. The men with flowers were found to solicit a higher response in the number of male and female drivers who stopped to offer a ride while flowers had no effect on drivers when the hitchhiker was a female. The association of flowers with romance is used to explain the results.

Flowers reflect our emotions and moods. They often convey feelings of compassion, regret, merriment or romance (Heilmeyer, 2001). Haviland-Jones, Rosario, Wilson and McGuire (2005) found women receiving floral bouquets to display the Duchenne or true smile more frequently than women who receive a fruit basket. These authors also found that giving flowers to men or women in an elevator elicits more positive social behavior than giving people a pen. They found that people receiving flowers initiated conversation more frequently or stood closer to others than those who did not receive flowers. It was also found that this effect was accentuated with women. For these authors, receiving flowers elicits positive emotion in humans, especially in women. In a recent study by Guéguen (2011), the influence of flowers on women's dating judgment and behavior was examined. In his first experiment, women who were exposed to flowers displayed in vases in a waiting-room while they watched a video of a man, perceived the man to be more attractive and sexier. They also reported being more inclined to accept a date with him. In a second experiment, it was found that women who were exposed to flowers responded more favorably to an explicit dating solicitation from a male confederate in a subsequent interaction.

Our objective was to evaluate whether hitchhikers holding flowers could positively influence female motorist behavior. Experimental studies in social psychology confirm that environmental cues have an influence on individual behavior. Berkowitz and LePage (1967) found

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that in the presence of a weapon, a participant in a laboratory administered more electric shocks to a confederate than without the presence of the weapon. Berger and Fitzsimons (2008) reported that orange-associated products were relatively more accessible when the color orange was more prevalent in the environment. Thus it could be expected that a bunch of flowers in hitchhiker hands might act as a positive environmental cue, especially for women drivers. Research on hitchhiking frequently showed that female motorists are reluctant to stop to offer hitchhikers a ride, especially when the hitchhiker is a male (Clifford & Cleary, 1971; Guéguen, 2001; Guéguen & Fischer-Lokou, 2004; Morgan, et al., 1975; Pomazal & Clore, 1973; Snyder, et al., 1974).

However, given the positive effect of flowers on women, we expected female motorists to be more inclined to stop and offer a ride to a male holding flowers while hitchhiking.

METHOD

Participants

The drivers included 1304 men and 696 women solicited near the entry of Presqu'île de Rhuys, a well-known peninsula in the south of Brittany, France. The experiment took place between 2 and 5 p. m. during several weekends on sunny days at the beginning of the summer holidays, in a place where hitchhikers were known to wait for motorists to offer them a ride.

Procedure

Five 20-year-old confederates were used in this experiment (3 men and 2 women). Each confederate was instructed to test 400 drivers. Precaution was taken to control the attractiveness of the confederates. All were evaluated previously as having average attractiveness. Their heights were nearly the same (from 175 cm to 178cm for the men and 165cm m to 168cm for the women) and their BMIs (Body Mass Index scores) ranged from 20 to 22.

After 100 drivers had passed (which took about 25 to 35 minutes), the confederate stopped and was replaced by another. The confederate-hitchhiker stood at the side of the road in a spot chosen for its high visibility to motorists and because a broad road zone made it easy and safe to stop. When a car came into view, the confederate was instructed to point his or her thumb up, the well-known hitchhiker signal in France, and to look along the side of the road. In the flower condition, the confederates were instructed to hold a bundle of flowers in their left hands while pointing their thumbs up with their right hands. The flower and no-flower conditions alternated with the passage of every 25 drivers.

In both conditions, the hitchhiker wore a small backpack in which he or she was instructed to place the flowers in the no-flower control condition. Only one confederate acted at a time, and the order and experimental conditions of the confederates were randomized. When a driver stopped, the confederate was instructed to debrief him or her, in accordance with the suggestions from the Laboratory Ethics Committee. Two observers sitting in a car parked on the opposite side of the road about 400 meters behind the confederate-hitchhiker counted the number of motorists who stopped and noted the motorists' gender. Both used two hand-held counters: one to count the female drivers and the other to count the male drivers. The convergence between the two observers' evaluations was high ($r = .98$).

RESULTS

The number of drivers who stopped per confederate and driver sex condition is presented in Table 1.

TABLE 1 Percentage of Motorists who Stopped According to Experimental Condition, Hitchhiker Gender & Motorist Gender

	Male Hitchhikers		Female Hitchhikers	
	Flowers	No Flowers	Flowers	No Flowers
Male Motorists N= 1304	13.6% (49/361)	6.8% (25/370)	10.7% (31/289)	12.3% (35/284)
Female Motorists N= 696	10.5% (25/239)	1.3% (3/230)	8.2% (9/111)	7.2% (12/116)

To account for the effects that the variables may have had, a 2 (driver gender) \times 2 (hitchhiker driver) \times 2 (experimental condition) log-linear analysis was applied. This technique was used to examine the relationship between more than two categorical variables. A main effect of the experimental condition was found ($\chi^2_{(1, N=2000)} = 8.89, p = .003, \phi = .07$) revealing that overall drivers stopped more readily for hitchhikers holding flowers (11.4%) than not (7.5%). A main effect of driver gender was found ($\chi^2_{(1, N=2000)} = 18.51, p < .001, \phi = .10$, revealing that men drivers stopped more readily (10.7%) than women drivers (7.0%). No main effect of hitchhiker gender was found ($\chi^2_{(1, N=2000)} = 3.16, p = 0.08, \phi = .04$). However, a significant interaction effect was found between experimental conditions and hitchhiker gender ($\chi^2_{(1, N=2000)} = 17.84, p < .001, \phi = .09$). Follow-up analysis showed that flowers have no effect when considering female hitchhikers ($\chi^2_{(1, N=800)} = 0.63, p = .43, \phi = .03$) whereas a significant effect of flowers was observed with male

hitchhikers ($\chi^2_{(1, N = 1200)} = 22.67, p < .001, \phi = .14$). This effect was found with both male ($\chi^2_{(1, N = 731)} = 9.33, p = .002, \phi = .11$) and female drivers ($\chi^2_{(1, N = 469)} = 17.5, p < .001, \phi = .19$).

DISCUSSION

In this experiment, a male hitchhiker holding flowers was found to be associated with a high number of male and female motorists stopping to offer a ride while no effect was found with female hitchhikers. This data has two interests. First of all, it has been found in previous studies done on hitchhiking in France, that female motorists are clearly reluctant to stop to offer a ride to male hitchhikers (Guéguen & Fischer-Lokou, 2004; Guéguen, 2001). In these later studies it was also found that factors that positively influenced the behavior of male motorists had no effect on female drivers. So, with a male hitchhiker holding flowers, it was the first time we found female drivers to stop at the same rate as men. Only male drivers stopped when the male hitchhiker held no flowers. Secondly, it was found that men reacted positively to the presence of flowers in the hands of male hitchhikers whereas flowers had no effect when held by a female hitchhiker. Such results are important given that flowers would be expected to have an influence on female drivers.

These two important findings could be explained by recent studies associated with the evocation of love and helping behavior and the association of flowers with romance. Flowers often convey feelings of romance (Guéguen, 2011; Heilmeyer, 2001). However, Jacob et al. (2009) found that men and women clearly associated flowers with romance when they are purchased by a man whereas they are associated with friendship or social norms when they are purchased by a woman. In other words, men tend to purchase flowers for a woman they love, whereas women tend to purchase flowers for a friend. Thus, in our study, when the male hitchhiker held a bunch of flowers in his hands, male and female motorists could have imagined that it was for his girlfriend. Such results are congruent with previous research showing an influence of an activation of the concept of love on helping behavior (Fischer-Lokou, Lamy, & Guéguen, 2009; Lamy, Fischer-Lokou, & Guéguen, 2009). However, in these studies, activation of such concepts was done with the help of the reminiscence of previous romantic events in the participants' lives.

Thus, in our experiment, results could be explained by these recent studies that found the activation of love to be associated with greater helping behavior. In our study, flowers probably elicited the concept of love which, in turn, led the motorist to offer help to the hitchhiker confederate. However, this activation of love was probably only activated when flowers were held by a male hitchhiker, given that flowers are

associated with love and romantic relationships when they are given by a man. With the female hitchhikers, flowers probably led the drivers to associate them with friendship, not love or romantic relationships. Without such a connotation of love, drivers were probably not led to stop to offer a ride to the female hitchhiker. Research on hitchhiking has frequently reported that female motorists are reluctant to stop to offer male hitchhikers a ride (Clifford & Cleary, 1971; Guéguen, 2001; Guéguen & Fischer-Lokou, 2004; Morgan, et al., 1975; Pomazal & Clore, 1973; Snyder, et al., 1974). In this study, the power of the love association was probably activated to a high enough level to affect the resistance of women to stop to offer a ride to a male hitchhiker.

The results could also be explained by further associations with the presence of flowers in the hands of the male hitchhikers. In this situation, the hitchhiker was perhaps perceived as less suspicious or threatening, which led drivers, and particularly female motorists, to offer a ride to this reassuring hitchhiker. Guéguen (2009) found that a male hitchhiker wearing a firefighter uniform was associated with a dramatic increase in the number of men and women drivers who stopped to offer a ride. When surveyed, most of the drivers said that they had stopped because they didn't believe the hitchhiker in the firefighter uniform to be someone dangerous or with bad intentions. Therefore, in our experiment, drivers could have perceived the male hitchhiker with flowers to be less dangerous and to have fewer bad intentions, which would explain their reason for stopping. Women hitchhikers were perceived as less dangerous and without any bad intentions whether they had flowers or not; that's perhaps why we found no difference between the two experimental conditions.

Of course such an explanation needs to be tested in further studies. This effect is perhaps unique and needs experimental replication. The confederates were not informed about the real objective of the study and previous research on this topic. However, they may have unconsciously behaved differently, which, in turn, influenced drivers' behavior. The fact that there was no difference between the two experimental conditions with the female confederates seems to guard against this possibility, but this bias remains in question. To prevent this bias, and to better evaluate the cognitive processes associated with such findings, it will be interesting, in further studies to explore drivers' perceptions of hitchhikers. This could be accomplished by presenting photographs of hitchhikers both with and without flowers in their hands. Our experiment was performed in France and could not be generalized to other cultures. Replications in different countries where cultural norms are different from those in France are deemed necessary.

REFERENCES

- Berger, J. & Fitzsimons, G. (2008). Dogs on the street, Pumas on your feet. *Journal of Marketing Research*, 45, 1-14.
- Berkowitz, L., & LePage, A. (1967). Weapons as aggression-eliciting stimuli. *Journal of Personality and Social Psychology*, 7, 202-207.
- Clifford, M., & Cleary, P. (1971). *The odds in hitchhiking*. unpublished manuscript, Wisconsin.
- Fischer-Lokou, J., Lamy, L., & Guéguen, N. (2009). Induced cognitions of love and helpfulness to lost persons. *Social Behavior and Personality*, 37, 1213-1220.
- Guéguen, N. (2001). Effect of humor on hitchhiking: a field experiment. *North American Journal of Psychology*, 3, 369-376.
- Guéguen N. (2011). "Say it With Flowers": Effect of flowers in a room on female's receptivity of a male's courtship request. *Social Influence*, 6, 105-112.
- Guéguen N. (2009). The effect of apparel on courtship request: A field study on the sex-appeal of a fireman. *European Journal of Social Sciences*, 12(2), 236-241.
- Guéguen, N., & Fischer-Lokou, J. (2004). Hitchhikers' smile and receipt of help. *Psychological Reports*, 94, 756-760.
- Haviland-Jones, J., Rosario, H. H., Wilson, P., & McGuire, T. R. (2005). An Environmental Approach to Positive Emotion: Flowers. *Journal of Evolutionary Psychology*, 3, 104-132.
- Heilmeyer, M. (2001). *The Language of Flowers: Symbols and Myths*. New York: Prestel USA.
- Jacob C., Guéguen N., Boulbry G. & Selmi S. (2009). "Love is in the air": Congruency between background music and goods in a flower shop. *International Review of Retail, Distribution and Consumer Research*, 19(1), 75-79.
- Lamy, L., Fischer-Lokou, J., & Guéguen, N. (2009). Induced reminiscence of love and charitable helping. *Current Psychology*, 28(3), 202-209.
- Morgan, C., Lockard, J., Fahrenbruch, C., & Smith, J. (1975). Hitchhiking: social signals at a distance. *Bulletin of the Psychonomic Society*, 5, 459-461.
- Pomazal, R., & Clore, G. (1973). Helping on the highway: the effects of dependency and sex. *Journal of Applied Social Psychology*, 3, 150-164.
- Snyder, M., Grether, J., & Keller, K. (1974). Staring and compliance: a field experiment on hitchhiking. *Journal of Applied Social Psychology*, 4, 165-170.

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