

THE EFFECT OF FACIAL MAKEUP ON THE FREQUENCY OF DRIVERS STOPPING FOR HITCHHIKERS¹

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Summary.—Judgments of photographs have shown that makeup enhances ratings of women's facial attractiveness. The present study assessed whether makeup affects the stopping behavior of drivers in response to a hitchhiker's signal. Four 20- to 22-year-old female confederates wore facial makeup, or not, while pretending to be hitchhiking. Frequency of stopping was compared in 1,600 male and female drivers. Facial makeup was associated with an increase in the number of male drivers who stopped to offer a ride. Makeup did not affect frequency of stopping by female drivers.

Researchers have shown that women's makeup is associated with positive evaluations of attractiveness. Graham and Jouhar (1981) found that female targets of average physical attractiveness presented on color photographs were judged as being more tidy, feminine, physically attractive, and sociable when they wore facial cosmetics. Cox and Glick (1986) and Workman and Johnson (1991) reported that women wearing makeup were perceived to be more feminine and sexy. Cash, Dawson, Davis, Bowen, and Galumbeck (1989) found that women who were photographed with cosmetics were evaluated by men to be more physically attractive than when no facial cosmetics were worn. Research has also revealed that the amount of cosmetics used leads to variation in evaluation. Mulhern, Fieldman, Hussey, Lévêque, and Pineau (2003) presented male and female participants with five photographs of women under different conditions: wearing no makeup, foundation only, eye makeup only, lip makeup only, and full facial makeup (foundation, eye makeup, and lip makeup). Both male and female participants judged female faces as more attractive (Cohen's $d = .30$) when they were shown wearing makeup; eye makeup and foundation were the strongest contributors.

On the whole, these studies have indicated that makeup enhances the perception of women's physical attractiveness. However, perceptions differed across participants' gender, and inconsistent results were found in

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the literature. Graham and Jouhar (1981) found that both male and female participants rated the attractiveness of a target wearing makeup more favorably. In Cash, *et al.*'s (1989) study, male judgments were found to be more favorable when the women were photographed with cosmetics than when they were not wearing cosmetics (Cohen's $d = .21$), whereas female judgments were not affected by the presence of makeup. In Mulhern, *et al.*'s (2003) study, sex differences were reported: women judged eye makeup as contributing most to the attractiveness while men rated eye makeup and foundation as having a significant effect on attractiveness. Workman and Johnson (1991) reported that female participants rated attractiveness and femininity higher when targets were wearing cosmetics. However, no male participants were used in their study.

Previous research has focused on evaluating the impression of facial attractiveness generated by photographs of women wearing makeup or not. Social psychologists now need to measure the behavioral effects of women's facial makeup, given that impressions measured in a laboratory setting are not always correlated with the behavior displayed in real life. In this study, the effect of women's facial makeup was evaluated in a hitchhiking setting.

Previous studies on hitchhiking have shown that the physical appearance of a hitchhiker could influence drivers' behavior, particularly that of male motorists. Morgan, Lockard, Fahrenbruch, and Smith (1975) and Guéguen (2007) found that motorists offered rides more frequently to female hitchhikers with an accentuated bust size (Cohen's $d = .10$). However, this effect was found with male drivers only, which would suggest that female motorists are less influenced by the physical appearance of female hitchhikers. In this study, women wearing cosmetics, or not, were instructed to pretend to be hitchhiking.

Hypothesis. Facial makeup of female hitchhikers will (a) have a positive, medium effect on male motorists' behavior, but (b) no statistically significant effect on female motorists' behavior.

METHOD

Participants

Drivers (959 men, 641 women) were solicited near the entry of a well-known peninsula in south Brittany, France. The experiment took place between 2 p.m. and 5 p.m. during two weekends, on sunny days at the beginning of the summer holidays. The place where the experiment was carried out was situated just beyond a traffic circle. Consequently, the motorists' speed was less than 15–18 mph (25–30 km per hour), which enabled them to pay attention to the hitchhiker.

Procedure

The confederates for this experiment were four Caucasian women ($M = 20.8$ years, $SD = 0.6$) selected from members of a group of female undergraduate students who had volunteered to participate as confederates in the experiment. They were selected because they had previously been rated by 24 male students to possess average physical attractiveness and because all of them had brown hair. All usually wore makeup. A young, female beautician applied makeup to the confederates during the experiment. For the makeup-free condition, the beautician cleaned and moisturized the faces of the women confederates. For the makeup condition, the beautician applied makeup to the eyes, cheeks, and lips of the confederates.

In order to evaluate whether the makeup worn by the confederates increased their attractiveness, they were photographed with and without makeup and evaluated by two groups of male undergraduate students (different from those used to select the four confederates among the volunteers) on a 9-point Likert-type scale with anchors 1: Not at all attractive and 9: Extremely attractive. All four confederates were rated to be statistically significantly more attractive when wearing makeup ($M = 6.87$, $SD = 1.49$) than when wearing no makeup ($M = 6.02$, $SD = 1.23$) ($t_{42} = 2.06$, $p = .05$, $d = 0.64$). The confederates were instructed to wear the same clothes in both experimental conditions: a pair of neat jeans, light-colored sneakers, and a white, tight shirt.

Each confederate was instructed to test 400 drivers. After the passage of 100 drivers (about 30 to 40 minutes), the confederate stopped and was replaced by another confederate. Only one confederate participated at a time, and the confederates' order and the experimental conditions were randomized. The confederate-hitchhikers 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 her thumb up, the well-known hitchhiker's signal in France, and to look along the side of the road. When a driver stopped, the confederate was instructed to debrief him/her, in accordance with the suggestions of the Laboratory Ethics Committee. The motorist was told that he/she had participated in an "altruism project" where hitchhiking was studied only to know how many people consent to offer a ride to a hitchhiker in the local area. Two observers sitting in a car parked on the opposite side of the road about 500 meters behind the confederate-hitchhiker counted the number of motorists who stopped and noted the motorists' sex. 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' evaluation was high ($r = .97$).

TABLE 1
 FREQUENCY AND PERCENTAGE OF MOTORISTS WHO STOPPED BY MAKEUP CONDITION AND GENDER

Group	Makeup		No Makeup	
	%	<i>f</i>	%	<i>f</i>
Male motorists (<i>n</i> = 959)	24.09	113/469 ^a	15.10	74/490 ^a
Female motorists (<i>n</i> = 641)	10.62	33/311	7.27	24/330

Note.—Frequencies with the same superscript are statistically significantly different at $p < .05$.

RESULTS

Preliminary data analysis conducted for the confederates showed no interaction effect on the dependent variable according to the experimental conditions [$\chi^2_4 (N = 1600) = 5.81, p = .21$] and drivers' sex [$\chi^2_1 (N = 1,600) = 3.16, p = .53$]. The data were combined and are presented in Table 1.

For the male drivers, there was a statistically significant difference between the two makeup conditions [$\chi^2_1 (N = 959) = 12.34, p < .001, r = .11$] with a small effect size, whereas the difference was not statistically significant for female drivers [$\chi^2_1 (N = 641) = 2.20, ns, r = .06$]. Overall, men stopped more frequently (19.5%) than women (8.9%) [$\chi^2_1 (N = 1,600) = 34.81, p < .001, r = .15$].

DISCUSSION

A greater number of male motorists stopped for female hitchhikers wearing makeup, whereas no difference was found for female motorists, supporting both parts of the hypothesis. The effect size was small in this situation where makeup was seen from a distance, as compared to the large effects seen when participants were viewing pictures of faces on a computer screen. However, the results appear to be congruent with the data obtained from impression-formation studies which have indicated that makeup is associated with higher male ratings of women's physical, sexual, and social attractiveness (Cash, *et al.*, 1989; Mulhern, *et al.*, 2003). Results also confirmed those of previous research showing that male, rather than female, motorists are influenced by the physical appearance of female hitchhikers (Morgan, *et al.*, 1975; Guéguen, 2007). Research has indicated that men place high value on physical attractiveness (Buss, 1989; Shackelford, Schmitt, & Buss, 2005). As women are perceived to be more attractive when wearing makeup, men would thus show more interest in and would be more likely to stop for female hitchhikers wearing makeup. On the other hand, women are probably responding to the female hitchhikers in terms of helping behavior and that is why no difference was found between the two experimental conditions. Of course, there were no manipulation checks on the drivers' motives or responses. It would be worth assessing motivations for the decision to stop.

This experiment has some limitations. The confederates were blind to the real objective of the study and previous research on this topic. However, they may have unconsciously behaved differently when wearing makeup or not, which in turn could have influenced the drivers' behavior. The fact that no difference was found with female motorists regarding the two experimental conditions seems to guard against this possibility, but this bias remains in question.

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