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I affirm that this essay / lab report is my own work and does not include any unacknowledged material taken from another source.

Signed:

Date:

## **Abstract**

Experimenters attempted to distribute leaflets to passers-by, maintaining or avoiding eye-contact as the independent variable (IV). Kleinke & Singer's (1979) study used three IVs, including eye-contact, but the same dependent variable (DV) as this study: the acceptance or rejection of a leaflet. Geuguen & Jacob's (2002) study used the same IV as this study but several different tasks as DVs. A significant difference between the two states of eye-contact was demonstrated in both these studies, and was expected in this one. This experiment used a far simpler and more generalised design than either of the two studies mentioned above. The alternative hypothesis was supported by the results; that participants would be more likely to accept a leaflet from a distributor who makes eye-contact than from one who did not. The study indicated that there was no significant difference in the time taken to conduct the experiment in either eye-contact state.

Eye-contact, or gaze, is an important aspect of non-verbal communication. Argyle and Cook (1976) wrote that eye-contact is not so much a communication signal, like smiling or frowning, but a two-way channel of communication, cueing conversational turn-taking. Exline, Ellyson and Long (1975) report that in a conversational setting, deliberate manipulation of eye-contact can be used to exert dominance over another.

Experimenters have used eye-contact and mutual gaze both as dependent variables, where the degree of eye-contact was measured to test the outcome, or as the independent variable where two conditions of eye-contact and non-eye-contact are compared using the results of a task or request. Mutual gaze differs from eye-contact in that it involves both participants looking at each other's faces and not necessarily their eyes (Kleinke, 1986). Kleinke maintains, however, that any difference is negligible as most mutual gazers (and experimenters) cannot tell if their partner is looking at their eyes or just their face.

Increased duration of gaze has been observed in dyads, two person interactions, where one person is attempting to ingratiate themselves with or seek approval from the other. Observations of high-school pupils in approval-seeking or approval-avoiding situations showed that eye-contact was greater in approval-seeking than in approval-avoiding situations (Pellegrini, Hicks & Gordon, 1970).

These studies have used eye-contact as the dependent variable. Eye-contact can also be used as the independent variable, in an eye-contact or non-eye-contact situation, the dependent variable being the success or failure of whatever task is associated with the interpersonal encounter.

Geuguen and Jacob (2002) used this form of model to show that a request may be more likely to be complied with if the requester made direct eye-contact with the participant than if they gave an evasive glance. Geuguen & Jacob repeated the same requests, using the two states of eye-contact, using members of the public in the street, although it should be stated that they were also interested in gender differences.

Kleinke and Singer (1979) conducted an experiment in which experimenters handed out leaflets to unsuspecting participants in the street. Gender, tone of voice and gaze were used as independent variables, and Kleinke and Singer concluded that, amongst other things, eye-contact would increase the chance of the leaflet being accepted.

These studies show that eye-contact can be used to make participants vulnerable or responsive to its effects. To that end, in a very simple experiment, it should be possible to manipulate the response of participants in a compliance or acceptance situation by using experimenters with two differing states of eye-contact: making eye-contact with the participants and not making eye-contact with the participants.

This experiment intends to show that participants will be more likely to accept leaflets from a distributor in the street who makes eye-contact with them than they will from a distributor who makes no eye-contact.

# Method

## **Design.**

The experiment was conducted with independent groups of participants, and confederates acting in pairs. One confederate from each pair attempted to distribute the leaflets and the other recorded the success or failure. Each pair, working independently, made a set number of attempts, and the total time taken was recorded. The attempts were recorded as either accepted or rejected.

The independent variable in this experiment is the state of eye-contact or non-eye contact between confederate and participant, and the dependent variable is the acceptance or refusal of the leaflet. The data collected is nominal.

It should be noted that the eye-contact experimenters tried to make eye-contact with the participants, but the participants were under no such obligation. It is not known whether any participants in the non-eye-contact experiments attempted to make eye-contact with the experimenter, because the experimenter was deliberately avoiding their gaze.

## **Participants.**

The participants were members of the public who were walking in the street at the time the experiment was being conducted. By the nature of the leaflets being handed out (advertising a nightclub), these participants may not have been entirely random; the distributors may have favoured younger people who appeared like they may have frequented nightclubs, although this was not part of the instructions. The experimenters were second-year psychology undergraduates. They formed into pairs by mutual agreement, with no regard to gender, age socio-economic status or ethnicity.

## **Materials.**

Each pair of experimenters received an unmarked envelope containing twenty small leaflets advertising a nightclub promotion and a sheet of paper bearing instructions for the experiment and a grid to record the results. There were an equal number of envelopes with instructions to make eye-contact or make no eye-contact, and the envelopes were distributed randomly.

## **Procedure.**

Upon opening their envelope, the experimenters discovered whether they were to make eye-contact or not with participants. The instructions specified three locations in Glasgow: Byres Road; Sauchiehall Street; Argyle Street, all of which are busy during the day, and times of day: 9.30 – 11.30 am; 1.30 – 3.30 pm, avoiding local rush hours and lunchtimes. The experimenters chose the location and time, and one confederate made twenty attempts to give out a leaflet, making eye-contact or not as appropriate, whilst the other recorded the results. The duration in seconds of the entire experiment was recorded.

## Results

The result shown in table 1, below, is a sample of 70 pairs of experimenters.

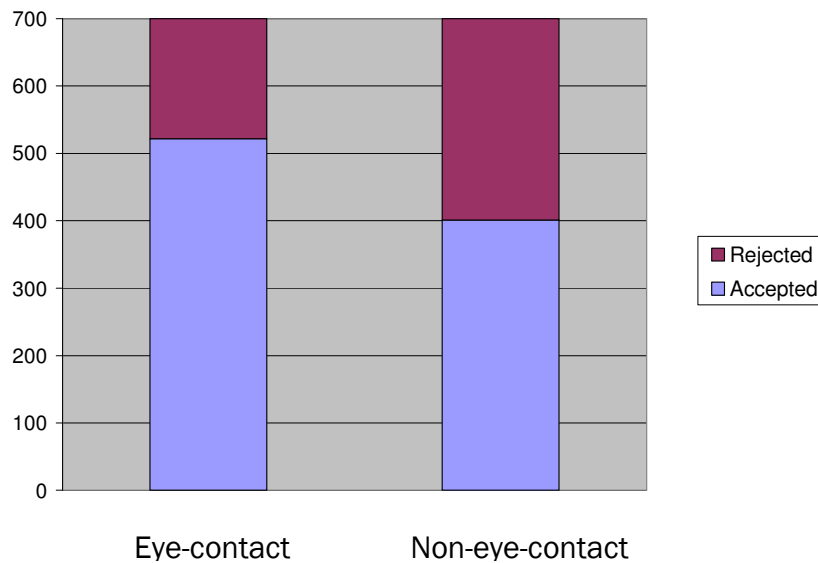
From a total of 1400 attempts, 700 for each state of eye-contact, the non-eye-contact experimenters recorded 401 leaflets accepted and 299 rejected. The eye-contact experimenters recorded 522 leaflets accepted and 178 rejected. The mode for both conditions is acceptance.

A chi-square test returned a value of 46.56, which is significant at the 1% level for 1 degree of freedom ( $\chi^2=46.55$ ,  $df=1$ ,  $p<0.0001$ ). See appendix for calculations.

**Table 1. Leaflets accepted or rejected by eye-contact state.**

	Eye-contact	No eye-contact
Leaflet accepted	522	401
Leaflet rejected	178	299

**Figure 1. Leaflets accepted or rejected by eye-contact state.**



The eye-contact distributors' mean duration was 479.88 seconds (standard deviation 79.82), for non-eye-contact distributors the mean duration was 466.11 seconds (standard deviation 83.37). An independent samples t-test shows no significant difference in the time aspect of this experiment:  $t(68) = 0.436$  n.s.

## Discussion

The results support the hypothesis that participants will be more likely to accept leaflets from a distributor in the street who makes eye-contact with them than they will from a distributor who makes no eye-contact.

If Argyle & Cook's (1976) concept of eye-contact as a two-way channel of communication is accepted, then the results may indicate that eye-contact draws a person into a social interaction, whereas avoiding eye-contact gives the other person a chance to avoid the situation. The design of the experiment, combined with the results of the time aspect, would tend to suggest that it only takes the briefest of eye-contact periods to gain the compliance of passing strangers in such a simple interaction.

This result supports the findings of Kleinke & Singer's (1979) study, but simplifies it by using one variable, eye-contact, instead of three: eye-contact; tone of voice; gender. Some of Geuguen & Jacob's (2002) experimental situation has been replicated, but with perhaps less precision in terms of the criteria for selecting people to participate and also the nature of the experimenters: less specific but more numerous.

The methodology of this study was not very specific as regards the selection of participants, or indeed the way the experimenters conducted the experiment. The large scale of the experiment, combined with the non-specific nature of the instructions however, may help to 'generalise' the findings about eye-contact and compliance.

One possible area for further investigation would address the fact that eye-contact is a bi-polar state, and it is not known how the leaflet distribution task would progress in a 'neutral' state of eye-contact, for example, whilst the experimenter was wearing opaque sunglasses or had their eyes concealed by a hat or the hood of a coat. This would need to be done in a fashion sympathetic to the environment: sunglasses on an overcast day, or a large coat with a hood on a bright summer's day would look strange, even disturbing, and may discourage participants from accepting a leaflet.

If the experiment were repeated with the neutral state of eye-contact added in, it may be possible to ascertain if eye-contact is an incentive to comply and accept the leaflet, or if the obvious absence of eye-contact is an excuse to avoid compliance by pretending the encounter is not taking place.

This experiment used two states of eye-contact as the independent variable to try and establish whether it has any effect on the compliance of strangers in a simple, no-cost task. It was found that participants were significantly more likely to accept a leaflet from a distributor who made eye-contact with them than from a distributor who avoided their gaze, and that there was no significant difference in the time taken for these interactions. Further research may help to establish a neutral level of compliance in such tasks, thereby showing whether eye-contact is a stronger positive influence in compliance, or if avoiding eye-contact is a stronger negative influence in the same situation.

## References.

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# Appendix

## Chi-square calculation

Observed results

	Eye-contact	No eye-contact	Total
Accepted	522	401	923
Rejected	178	299	477
Total	700	700	1400

Expected results

	Eye-contact	No eye-contact	Total
Accepted	$\frac{700 \times 923}{1400}$ =461.5	$\frac{700 \times 923}{1400}$ =461.5	923
Rejected	$\frac{700 \times 477}{1400}$ =238.5	$\frac{700 \times 477}{1400}$ =238.5	477
Total	700	700	1400

Chi-square

$$\begin{array}{cccc} \frac{(522 - 461.5)^2}{461.5} & \frac{(401 - 461.5)^2}{461.5} & \frac{(178 - 238.5)^2}{238.5} & \frac{(299 - 238.5)^2}{238.5} \\ =7.93 & =7.93 & =15.35 & =15.35 \end{array}$$

$$7.93 + 7.93 + 15.35 + 15.35 = 46.56$$

For 1 degree of freedom, significance at 5%,  $x^2 \geq 3.841$ ; at 1%,  $x^2 \geq 6.635$ .