

# Psychology report on conformity

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ABSTRACT Conformity is defined as acting in a manner which is accepted by a social group or a change in behaviour of an individual or minority in an attempt to comply with the behaviour of the majority. Students at Dundee College carried out a research investigation in order to discover whether having fictitious estimates in front of their participants, they would conform to a group norm when estimating the number of pasta pieces in a pack. An experimental group was used along with a control group in order to compare their findings. The experimental group was able to view fictitious estimates in order to reach their own conclusion regarding the number of pasta pieces whereas the control group were unable to view these fictitious estimates before deciding their own estimate. The findings concluded that the experimental group did show a level of conformity and that otherâs influences do have an affect on judgement.

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## Abstract

Conformity is defined as acting in a manner which is accepted by a social group or a change in behaviour of an individual or minority in an attempt to comply with the behaviour of the majority.

Students at Dundee College carried out a research investigation in order to discover whether having fictitious estimates in front of their participants, they would conform to a group norm when estimating the number of pasta pieces in a pack.

An experimental group was used along with a control group in order to compare their findings. The experimental group was able to view fictitious estimates in order to reach their own conclusion regarding the number of pasta pieces whereas the control group were unable to view these fictitious estimates before deciding their own estimate.

The findings concluded that the experimental group did show a level of conformity and that other influences do have an affect on judgement.

## Introduction

Conformity can be defined as acting in a manner which is accepted by a social group. Another meaning of conformity is a change in the behaviour of a minority or individual to comply with the behaviour of a majority. Conformity is a part of social psychology which looks at how people think, behave and feel when interacting or in the presence of others and how these thoughts, behaviours and feelings are affected by the presence of others.

There have been many studies carried out concerning social psychology and many have been experiments testing the level of conformity of participants. One such study in the 1950s was Asche's unambiguous study of conformity. In this study Asche used six participants, five of whom were helping Asche with his experiments, unknown to the sixth participant. He then asked the participants a simple question about the length of a line with an obviously correct answer and two wrong answers. When asked this question, Asche's five stooges deliberately gave the wrong answer and although the correct answer was

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obvious, almost three quarters of all real participants gave the same wrong answer and displayed a high level of conformity.

In 1932, the first study of conformity was carried out by Jenness. This experiment was ambiguous, meaning there was no right or wrong answer, and focussed on the estimates of participants on the number of beans in a bottle. Firstly, Jenness asked his participants to individually estimate the number of beans. He then requested the group of participants to provide him with just one estimate for the group. Finally, the researcher once again asked individual participants for an estimate and found that nearly all participants changed their original individual estimate to be closer to the group estimate, therefore showing a level of conformity.

Jenness's study closely relates to this experiment of conformity which was carried out by students studying Psychology at Dundee College. *An Experimental Investigation on the level of conformity and influence others' judgements have when estimating the number of pasta pieces in a pack.* The students' aim was to discover whether having fictitious estimates in front of them, which was the independent variable, participants would conform to a group norm when estimating the number of pasta pieces in a pack. The experimental hypothesis was that participants subject to the estimates of others would conform to a group norm. The students' null hypothesis was that there would be no significant difference, in terms of conformity, between the estimates of participants in the control group (those who were not able to see others' estimates) and the estimates of participants in the experimental group (those who could view fictitious estimates). If there had been any significant difference in the two sets of results, it would have been down to chance or personal individual differences.

Technical terms which relate to this study are Informational and Normative Social Influence. Informational Social Influence is the evaluation of ideas and attitudes and confirming that they are correct. In this study the participants who had fictitious estimates available to them were able to evaluate these fictitious scores and confirm using their rationale that they were correct and therefore conform to these fictitious estimates or social or group norms. This then leads onto Normative Social Influence which is being motivated to conform because of others' influence to conform to their social or group norms in order to be accepted. The social or group norms in this study were the fictitious estimates and the experimenters were therefore aiming to figure out whether Informational Social Influence and, or Normative Social Influence had an impact on this study.

### Method

#### **Design:**

The study: *An experimental investigation on the level of conformity and influence others' judgements have when estimating the number of pasta pieces in a pack* was conducted using an experimental design in the form of a lab experiment. The type of design used was the independent measures design as it was necessary because of the experiment itself containing one experimental group and one control group. Therefore, the design used had to be appropriate for the experiment. Participants were chosen using opportunity sampling,

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meaning that the participants were readily available to the experimenter. The participants were then assigned randomly to each condition of the experiment with one female and one male being used in each of the two conditions; the control group and the experimental group.

The two conditions of the independent variable used included the use of a completed estimate sheet with fictitious estimates of the amount of pasta pieces in a pack already written on it and a blank estimate sheet with no estimates. The dependent variable in this study was the participant's estimate of the number of pasta pieces in a pack. The participant's estimates or the dependent variable enabled the researcher to decipher whether there was a level of conformity when participants were able to view fictitious estimates.

### **Participants:**

A set of standardised instructions was used by each researcher stating that 4 participants, 2 male and 2 female, were to be obtained for the experiment. 1 female and 1 male took part in each condition of the experiment. Opportunity sampling was used to obtain the 4 participants, meaning that they were readily available to the researcher and therefore were a mixture of family and friends. Participant 1, who took part in the experimental condition of the study, was male and 22 years old, while participant 2, who also took part in the experimental condition of the experiment was female and 18 years old. The participants of the controlled condition of the experiment included a male of 50 years old and a female of 48 years old.

### **Materials:**

A brief was read out to each participant before the beginning of the experiment which can be seen in Appendix 3. This included a summary of what the experiment involved, the need for consent from the participant, the right to withdraw or withdraw their information at any time during the experiment and also the assurance of confidentiality of results and information. A consent form was also used which issued the researcher with the consent of the participants to use their information and estimates for the study. A copy of the consent form used can be found in Appendix 4.

An estimate sheet was also used in this research investigation to collect the data needed to carry out the data analysis and come to a conclusion about the findings. This estimate sheet included a column which indicated a participant number, the participants name and also a column which was entitled 'estimate'. The participants taking part in the experimental condition of the experiment saw some rows of the estimate sheet pre-completed while the participants taking part in the controlled condition of the study only saw a blank sheet. A blank copy of the estimate sheet can be found in Appendix 5.

The final piece of paper work which was used during this research investigation was the debrief after the participant had completed the experiment. This included the true aim of the experiment, to discover if participants would conform to a 'group norm' in an ambiguous task. The debrief also explains the

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conditions of the experiment and also gives a definition of conformity. This can be found in Appendix 6 of the Appendices.

### **Procedure:**

Firstly, participants were each called individually into the 'experiment room' by the researcher where it was quiet and well lit. The researcher then read out the brief which described what the experiment involved and also that the participant would need to give their consent to take part in the experiment and that they had the right to withdraw at any time (Appendix 3). Once this was completed participants were then asked to read and sign a consent form which was needed before the experiment could begin (Appendix 4).

After this the pack of pasta was revealed to the participant while they were told that they could take as much time as they wanted to make a decision regarding the number of pieces in the pack and then once they had made a decision, they were asked to write their name and estimate on the estimate sheet whether it was blank in the control group or pre-completed in the experimental group. Both conditions' participants were treated in the same way. Although one main difference was that the participants of the control group could not view the fictitious estimates whereas the participants of the experimental group could before making their decision regarding the number of pasta pieces.

Once the experiment was completed by each participant, they were then thanked for taking part in the research investigation and the debrief (Appendix 6) was read out to them. This included informing the participant of the aim of the experiment and also a definition of conformity which helped each participant to understand the experiment better. The debrief also informed each participant that they had the option to choose to withdraw their data at that point in time.

Finally, the participant then got the opportunity to ask any question that he or she desired to ask and these questions were answered to the best of their ability by the researcher.

### **Results**

Once the data was collected by all experimenters, it was then collated and readied for further in depth analysis to decipher whether the hypothesis of the experiment matched the results. The mean estimates of the Control and Experimental groups were calculated along with total variance and finally the standard deviation of both groups. These are shown in tables 1 and 2 in the appendices and summarised in the table below.

### **Mean Estimates and Standard Deviation of Control Group and Experimental Group**

**Mean Estimate**

**Standard Deviation**

Control Group

420

252

Experimental Group

453

124

The table above shows the mean estimates of both the Control Group and the Experimental Group. As the mean number of the fictitious estimates was 470, a level of conformity can be seen as the Experimental Group (those who were able to view the fictitious estimates) mean of 453 is a lot closer to it than the Control Group mean of 420. This means that the participants in the Experimental Group had estimates closer to the fictitious estimates in general, compared with the lower estimates of the Control Group.

The table also shows the standard deviation of both groups where the Control Group's SD is 252 and the Experimental Group's SD is 124. The standard deviation of the Control Group was substantially larger than the Experimental Group, therefore suggesting that because of the Experimental Group being able to view fictitious estimates, there was less of a variation in estimates and also because of this, a level of conformity is suggested. The estimates are closer together than those of the Control Group; where no estimates were visible to the participants. Therefore, when comparing the standard deviation of both groups, the results illustrated that there was a level of conformity. Based on the standard deviation of the two groups, the results matched the experimental hypothesis that participants would conform to a 'group norm' when estimating the number of pasta pieces in a pack.

The graph above summarises the mean estimates of both the Control Group and the Experimental Group. Once again this shows that there was a level of conformity as the mean of the Experimental Group was closer to the mean of the fictitious estimates and therefore this confirms that the results matched the experimental hypothesis that participants subjected to the fictitious estimates of others would conform to a 'group norm'.

## Discussion

The findings of the study *an experimental investigation on the level of conformity and influence othersâ judgements have when estimating the number of pasta pieces in a pack* support the experimental hypothesis that participants subjected to the estimates of others would conform to a group norm. Therefore the null hypothesis that there would be no significant difference in terms of conformity between the estimates of participants in the control group and the estimates of those in the experimental group and if there was any significant difference between the sets of results then it would be down to chance, has been rejected. The null hypothesis has been rejected as the data collected has shown that the standard deviation of the experimental group is small enough compared to the control group to confirm that there was less of a variation in estimates from the experimental group and therefore because of the availability of fictitious estimates to that group, a level of conformity has been suggested.

Although a difference was found between the sets of results regarding conformity, it was not a big enough difference to generalise the suggestion that people will conform when influenced by others to conform to their group norms in order to be accepted. The results therefore do not completely support the idea of Normative Social Influence although this may be down to a small sample of participants rather than the actual findings of the study. This may also be down to individual differences. For instance, a stubborn person who took part in the experimental condition of the experiment may not have wanted to be seen as the same as other participants and therefore they may have given an answer which does not reflect what they believed the amount of pasta pieces to be, but rather it reflects that they will not conform even when subjected to estimates which are similar in number. For example, this study does not have the conviction of one such as Jennessâ 1932 study of conformity where a similar experiment revealed a much higher level of conformity.

Having said this however, the results from the study do support the experimental hypothesis over all in that they match what was predicted; that participants subjected to the estimates of others would conform to a group norm. The results from this study do however support the idea of Informational Social Influence where an individual will evaluate ideas and attitudes, in this case estimates, and confirm that they are correct in order to have a sense of control and competence.

The poor ecological validity of this research investigation is a stumbling block when it comes to generalising findings of conformity from this experiment. It cannot be said that if there was a bigger sample of participants that the results would look the same and that a level of conformity would still be evident. This may be down to individual differences in participants and therefore the independent measures design has a flaw in that there is a potential for error resulting from these individual differences. Therefore the design of the experiment disables the findings and results from being generalised and as a result the ecological validity is poor.

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Consequently, by having looked at results such as the standard deviation of both the control group and the experimental group, they are evidence of a level of conformity in this study. The large difference between the two sets of results and the comparatively small standard deviation of the experimental group results illustrates that the estimates are less varied and "spread out" than the control group and are much nearer to the fictitious estimates, therefore suggesting a level of conformity.

### Conclusion

The findings of the research investigation illustrate a level of conformity by participants when subjected to fictitious estimates compared with participants unable to view fictitious estimates.

Therefore, by studying the results of the experiment such as the average estimates of both groups and comparing them, or comparing the standard deviation of the control group and experimental group it is clear that these findings support the experimental hypothesis that participants subject to the estimates of others will conform to a group norm and additionally, the null hypothesis that there will be no difference between results and that any difference will be down to chance, can be rejected.

### References

Asch, S. E. (1956). Studies of independence and conformity: "A minority of one against a unanimous majority", *Psychological Monographs*, 70

Jenness, A. (1932). "Social Influences In The Change Of Opinion", *The Journal of Abnormal and Social Psychology*. Vol 27, April 1932, 29-34.

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### Appendices



**Appendix 1**

Control Group

**Participant**

**Estimate (x)**

**Estimate (x)-mean**

**(Estimate [x]-mean)<sup>2</sup>**

1

340

80

6400

2

590

-170

28900

3

85

335

112225

4

327

93

8649

5

293

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127

16129

6

1000

-580

336400

7

671

-251

63001

8

245

175

30625

9

1000

-580

336400

10

408

12

144

11

500

-80

6400

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12

250

170

28900

13

1000

-580

336400

14

369

51

2601

15

350

70

4900

16

510

-90

8100

17

451

-31

961

18

342

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78

6084

19

501

-81

6561

20

200

220

48400

21

412

8

64

22

210

210

44100

23

829

-409

167281

24

100

320

102400

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25

450

-30

900

26

200

220

48400

27

170

250

62500

28

250

170

28900

29

250

170

28900

30

475

-55

3025

31

257

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163

26569

Total Mean: 420

Total Variance: 63374

SD: 252

Appendix 1 shows a full list of estimates from the Control Group participants along with the Mean estimates, Total Variance and the Standard Deviation of the Control Group.

### **Appendix 2**

Experimental Group

#### **Participants**

**Estimate (x)**

**Estimate (x)-mean**

**(Estimate [x]-mean)<sup>2</sup>**

1

302

152

23104

2

700

-247

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61009

3

400

53

2809

4

560

-7

49

5

564

111

12321

6

495

-42

1764

7

420

33

1089

8

267

186

34596

9

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490

-37

1369

10

359

94

8836

11

350

103

10609

12

420

33

1089

13

455

-2

4

14

800

-347

120409

15

450

3



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9

16

505

-52

2704

17

350

103

10609

18

337

116

13456

19

275

178

31684

20

446

7

49

21

591

-138

19044

22

## Psychology report on conformity

495

-42

1764

23

395

58

3364

24

500

-47

2209

25

300

153

23409

26

550

-97

9409

27

715

-262

68644

28

412

41

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1681

29

492

-39

1521

30

401

52

2704

31

502

-49

2401

32

499

-46

2116

Total Mean: 453

Total Variance: 15349

SD: 124

Appendix 2 shows a full list of estimates from the Experimental Group participants along with the Mean estimates, Total Variance and Standard Deviation of the Experimental Group.

**Appendix 3**

**Standardised Instructions**

As part of an investigation into gender differences of visual perception, psychology students at Dundee College are required to conduct research as part of our course. Volunteers are needed to judge the number of pasta pieces in a pack of pasta.

As a participant, you have the right to withdraw from the experiment at any point throughout the research. Any questions after the research will be answered and you will be debriefed at the end of the experiment. Your information will not be shared with anyone else out with the experiment, your consent will be required to use your results and you will receive full confidentiality throughout the time.

Appendix 3 shows the brief participants were given before the beginning of the experiment summarising what the experiment involves and also the need for consent and the right to withdraw from the experiment at any time.

**Appendix 4**

**Consent Form**

As a volunteer in a psychology experiment you will be asked to take part in a short visual estimate task. All data will be treated in accordance with both the data protection act and The British Psychological Society's Ethics Committee. If at any time during the task you wish to withdraw, the procedure will be terminated immediately and you will be under no obligation to continue at a later time or date.

I have read the preceding statement and I the under signed consent to taking part in this psychological study.

Signatureâ lâ lâ lâ lâ lâ lâ lâ lâ lâ lâ lâ l.

Nameâ lâ lâ lâ lâ lâ lâ lâ lâ lâ lâ lâ lâ l

**Appendix 5**

**Higher Psychology Research Investigation**

Please provide your name and estimate in the table below

No.

Name

Estimate

1

2

3

4

5

6

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7

8

9

10

11

12

13

14

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15

16

17

18

19

20

21

22

23

24

25

Appendix 5 shows the estimate sheet for participants to fill out during the experiment.

## **Appendix 6**

### **Debrief**

The aim of this research was to discover whether people would conform to a group norm in an ambiguous task. Aronson (1999) defined such conformity as "a change in a person's behaviour or opinions as a result of real or imagined pressure from a person or group of people." In this present study, the experimental group were subjected to group pressure in that they were able to view the high estimates given by fictitious participants before giving their decision. The control group were not subjected to group pressure, as they were free to make their own decision without any influence from fictitious estimates. Your results will be collated with those of other participants and should hopefully show that estimates of those in the experimental condition tend to move toward a group norm.

You can choose to withdraw your data at this point in accordance with your rights as a participant. Every effort has been made to ensure you were not distressed by the research in any way and hopefully that you have been treated appropriately throughout.

Do you have any questions based on any of the above?



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**Thank you** for taking part in this investigation.

Appendix 6 shows the debrief participants were given once the experiment had been completed.

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