



INCIDENTAL SIMILARITY AND INFLUENCE OF FOOD PREFERENCES AND JUDGMENT: CHANGING TO BE CLOSER TO SIMILAR PEOPLE

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Abstract :

Research has shown that people like more those who have something in common with them and are more likely to comply with a request addressed by similar individuals. We hypothesized that such similarity could also influence people's preferences. First, 8-9-year-old children were led to believe that they shared the same birthday with an instructor. Afterwards, the children were asked about their food preferences and solicited to taste vegetables they disliked. Two weeks later, a survey was administered and revealed that the children in the incidental similarity condition expressed a higher liking for the vegetable disliked and more vegetable consumption. These changes in their vegetable consumption were confirmed by their mother. We suggest that similarity led participants to change their own attitudes and values to bring them closer to a similar target.

Keywords: similarity, children, evaluation

1. Introduction

Studies have shown that similarity between two strangers is associated with more positive relationships during their first encounter; similarity also brings a more positive perception of individuals who share something in common. Finch and Cialdini (1989) reported that participants rated a maligned historical figure, Rasputin, less harshly when they believed that they shared the same birthday. Jiang, Hoegg, Dahl, and Chattopadhyay (2010) also found that sharing the same birthday with someone increases people's positive perception of that individual. The perception that people have of

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another person who is like them is not only more positive, but it is also associated with positive behavior toward that person.

Various studies have shown that behavior towards an unknown solicitor is also affected by incidental similarities. Individuals are more likely to comply with a request when requesters are dressed in a manner like them (Emswiller, Deaux, & Willits, 1971; Green & Giles, 1973). Burger, Messian, Patel, del Prado, and Anderson (2004) reported that undergraduates who believed they shared a birthday, a first name, or fingerprint similarities with a confederate were more likely to comply with a request from the confederate (for instance, agreeing to read an eight-page essay and giving one page of written feedback the following day). These authors also reported that greater compliance with the request was observed when participants believed they shared a rare characteristic with the requester than when they shared a common characteristic. Consumer attitudes are also affected by incidental similarity. Jiang *et al.* (2010) found that sharing the same birthday with a salesperson increased consumers' favorable attitudes and purchase intentions toward the service or product offered by the salesperson. Using a prisoner's dilemma game, Miller, Downs, and Prentice (1998) observed that participants who were led to believe that they shared the same birthday with their opponent cooperated more often.

Face-to-face interactions are not necessary to create greater compliance with a request. Studies have shown that the effect of similarity between two strangers can be observed in a computer-mediated communication context. Guéguen, Pichot, and Le Dreff (2005) carried out an experiment where students received an e-mail containing a 40-question survey on their food habits, which required 15-20 minutes to complete. This questionnaire came from a hypothetical university student in which the subjects were enrolled. In half of the cases, the surname of the solicitor, which appeared in his/her electronic address, was the same as the surname of the target. Results showed that compliance with the request was significantly higher in the same-surname condition than in the different-surname condition and that the response delay was significantly shorter in the same-surname condition than in the control condition. Oates and Wilson (2002) found the same effect when using a similar first name between the sender and the receiver of email messages. In the same way, Martin, Jacob, and Guéguen (2013) observed that Facebook users who were contacted by a male stranger and asked to become his friend accepted more often when they shared the same birthday with the unknown solicitor.

Another study by Guéguen, Martin, and Meineri (2011) indicated that incidental similarity fosters implicit behavior. At a pedestrian crossing, confederates asked participants for the time and, in the similarity condition, said they had the same watch as the participant. The amount of time that the participants lingered near the confederates was measured; findings revealed that participants spent significantly more time near the confederate in the similarity condition.

1.1 Incidental similarity and the sense of association

Incidental similarity thus appears to be a good way to increase compliance with a request and to foster social relationships. From a theoretical point of view, the positive effects of incidental similarity on the social relationships between two individuals are congruent with Heider's (1958) suggestion that incidental similarities create a sense of association between people that, in turn, leads to the enhancement of positive perception or compliance behavior. Jiang *et al.* (2010) reported that sharing the same birthday with someone increases the feeling of connectedness with that individual, while Miller *et al.* (1998) observed that such a birthday similarity increases cooperation. Other studies also indicated that the feelings of affiliation and rapport created by incidental similarity lead participants to reveal intimate information. Martin and Guéguen (2013) and Guéguen (2015) conducted a study whereby interviewers approached passersby for their participation in a survey on sexual behavior in which the questions became increasingly intimate. At the beginning of the survey, the interviewer pointed out (similarity condition) or not (no similarity condition) that he/she shared the same birthday as the participant. Participants in the similarity condition responded to more questions particularly to very intimate questions (Guéguen, 2015). These authors argued that the feeling of closeness created by incidental similarity could explain these results because, in everyday life, people reveal intimate information only to those who are close to them.

2. Study objectives and hypothesis

Several objectives were pursued in this study. First, we wished to investigate whether incidental similarity could influence children. It is important to know whether human beings at a young age are also influenced by incidental similarity in social interaction. All the studies reported above investigated social interaction between adults, and the effect of incidental similarity on children has never been examined previously. Second, we wished to evaluate the long-term effects of incidental similarity, given the fact that all the studies on incidental mimicry have focused on the immediate evaluation of the target or immediate compliance with the request addressed by the similar individual. Third, and most importantly, we wished to know whether similarity could lead participants to change their attitudes about their usual preferences when they were informed about the preferences of a similar individual. In the studies reported above, participants evaluated the unknown similar individual or were asked to comply with a request addressed by the similar individual. We wondered whether similarity could also affect the participants' own attitudes so that these would be nearer the similar individual's attitudes. Incidental similarity could lead people to like a similar individual but also to like what this similar individual likes.

All these suggestions were examined in this study, where 8-9-year-old children were led to believe that they shared their birthday with an instructor. Children were asked for their food preferences, and the instructors suggested their own preferences. Afterwards, we examined children's food preferences and their changes in food behavior.

We also examined how the children perceived the task and the instructor. We hypothesized that incidental similarity could lead the children to change their preferences and food consumption in accordance with the suggestion of the instructor in the similarity condition.

3. Material and Methods

3.1 Participants

The participants were 51 children (25 boys and 26 girls) aged 8 to 9. They were enrolled in a French elementary school located in a medium-sized town on the West Atlantic coast in France. The participants were randomly assigned to one of two experimental conditions.

3.2 Procedure

Before beginning the experiment, three female students in social and educational science, chosen to act as instructors, were carefully trained and observed while participating in a pretest performed in a different school from the one chosen for the experiment. The interview lasted around 15 minutes. The instructors and the children were alone in a separate room near their classroom. The experiment was presented as a study of children's food tastes and preferences. This topic was used because it is an easy and non-problematic topic that generally leads children to respond readily to an interviewer. Before beginning the interview, the instructor asked the children about their birthdays. In the incidental similarity condition, the instructor said with a smile, *"Oh, it's funny. We have the same birthdate"* and then reported the date on her form; in the control condition, the instructor said with a smile *"OK, thanks"* and then reported the date on her form. Then, in both conditions, the interview began, and the instructor said to the children that she was trying to understand what they ate in their school canteen or at home and what they liked/disliked. She asked several questions concerning their food consumption (e.g., the names of the vegetables preferred/non-preferred by the children, the names of the non-preferred meals, and the food preferred for their afternoon snack). At the end of the interview, the instructor said, *"You said to me that you disliked X (name of the non-preferred vegetable). When I was a child, I also disliked this vegetable very much, but now I love it."* Then, the instructor smiled and said, *"I have something to ask you. Would you agree to eat this vegetable you disliked and that I also disliked in the past to know if, like me, you like it more now?"* All the children consented, and the instructor smiled and thanked them warmly. The instructor added that she had finished and took the children back to their classroom.

Two weeks later, another young woman interviewer, unaware of the experimental conditions the children had experienced, came to the school. After introducing herself, the interviewer explained that she just wanted them to respond to a few questions. The interviewer added that this survey was related to the interview conducted by the female instructor two weeks previously concerning the children's food habits. The questionnaire was then administered to the children, and some filler items and questions were

associated with vegetables. The children were asked whether they had tasted the vegetable they said they disliked two weeks before; they were also asked to report how difficult it was to taste this vegetable and to say whether they liked this vegetable more now than in the past. They had to say how they consumed vegetables now compared with the past and to evaluate how they consumed fruit now compared with the past. Finally, the interviewer asked the children to evaluate their pleasure in participating in the previous interview, whether they felt at ease during the task, and whether they felt the instructor understood them well.

Each evaluation was made on a 7-point Likert-type scale going from 1 “*No pleasure*” to 7 “*High pleasure*” for the children’s pleasure in participating in the survey or 1 “*I do not like vegetables*” to 7 “*I like vegetables very much*” for measuring the children’s like/dislike of vegetables. The children gave their responses verbally to the interviewer, who noted them on a form. In the end, the interviewer smiled, thanked the children warmly, and took them back to their classroom. The children’s parents (in all the cases, their mother) were also involved and asked whether their child had eaten at home one or more vegetables he/she usually disliked, whether they felt that their child seemed to enjoy eating vegetables more than in the past, whether their child had solicited more vegetables over the last two weeks, and whether their child’s siblings had also solicited more vegetables over the last two weeks. The children’s mothers were interviewed while they waited for their children at the school gates.

4. Results

A preliminary analysis indicated no interaction effect between experimental conditions and gender of participants. Accordingly, the data were collapsed across participants’ gender. The first part of the study measured the children’s vegetable and fruit consumption. The data are shown in Table 1.

Table 1: Children’s consumption and evaluation of vegetables and fruit

	Similarity	Control
Tasting the vegetables previously disliked (number of yes)	96% (24/25)	92% (24/26)
Difficulty to taste the vegetable disliked (high score = less difficulty)	4.68 (1.46) ¹	3.35 (1.96)
Liking the vegetable target more now than before (number of yes)	68% (17/25)	31% (8/26)
Vegetable consumption (high score = more consumption)	4.84 (1.25) ¹	3.85 (1.64)
Fruit consumption (high score = more consumption)	2.56 (1.19) ¹	2.65 (1.16)

1- Mean (SD in brackets)

With the number of children who said that they had eaten the vegetable target, a Chi-square independent test was performed and revealed no significant difference ($\chi^2(1,$

$N = 51$) = 0.31, $p = .575$, $r = .08$) attesting that similarity did not increase the number of children who consented to test the vegetable they disliked. However, we observed that the rate of compliance was higher in the similarity condition.

Concerning the difficulty of tasting the vegetable target, the comparison between the two experimental conditions was evaluated using the help of a Student-Fisher independent test and revealed a significant difference ($t(49, 2\text{-tailed}) = 2.74$, $p = .009$, $d = 0.78$) suggesting that children in the similarity condition expressed less difficulty in eating the vegetable target than participants in the control group.

With the number of children who said that they liked the vegetable target more now than before, a Chi-square independent test revealed a significant difference ($\chi^2(1, N = 51) = 7.07$, $p = .008$, $r = .35$) showing that similarity enhanced the children's interest for the vegetable target.

Results also show that the children declared they had consumed more vegetables now than in the past in the similarity condition ($t(49, 2\text{-tailed}) = 2.42$, $p = .02$, $d = 0.69$) whereas no change was reported regarding their fruit consumption ($t(49, 2\text{-tailed}) = 0.27$, $p = .79$, $d = 0.08$), suggesting that similarity affected the children's vegetable consumption only.

The second part of the study measured how the children perceived the situation and the instructor. The data are shown in Table 2.

Table 2: Mean scores (SD in brackets) of children's evaluations of the task and the instructor

	Similarity	Control	Test
Pleasure to respond	6.64 (0.65) ¹	5.52 (1.73)	$t(48) = 3.03$, $p = .004$ $d = 0.87$
Feeling at ease during the task	6.52 (0.71)	5.64 (1.70)	$t(48) = 2.39$, $p = .021$ $d = 0.69$
Feeling understood by the instructor	6.56 (0.72)	5.72 (1.90)	$t(48) = 2.07$, $p = .044$ $d = 0.60$

1- Mean (SD in brackets)

Comparison between the two experimental conditions was evaluated using the help of a Student-Fisher independent test. Results of the analysis using two-tailed probability and the effect size of the difference are shown in the third column of Table 2. They show that in the similarity condition, the children declared more pleasure with the task, and they believed they had been heard and understood at a higher level than the children in the control condition.

The last part of the study measured the parents' responses. The data are shown in Table 3.

Table 3: Mothers' responses

	Similarity	Control
Tasting the vegetables disliked	84% (21/25)	54% (14/26)
Higher preference for vegetables than before	60% (15/25)	54% (14/26)
Tasting more vegetables in general	60% (15/25)	23% (6/26)
Soliciting their mother for vegetables	56% (14/25)	19% (5/26)
Siblings' solicitation of vegetables	64% (9/14)	60% (9/15)

With the number of mothers who said that their child had eaten one or more vegetables he/she usually disliked, a significant difference was reported ($\chi^2(1, N = 51) = 5.38, p = .02, r = .31$) revealing that more mothers declared that their child had eaten disliked vegetables in the similarity condition than in the control condition. Mothers also declared that their child had tasted more vegetables in general over the previous two weeks ($\chi^2(1, N = 51) = 7.17, p = .007, r = .35$). However, parents in both conditions reported no difference regarding vegetable preference over those two weeks ($\chi^2(1, N = 51) = 0.20, p = .657, r = .06$). The mothers reported that their child in the similarity condition had solicited them more for vegetables ($\chi^2(1, N = 51) = 6.13, p = .013, r = .32$) but they reported no change in the demand for vegetables addressed by their other child/children ($\chi^2(1, N = 29) = 0.60, p = .812, r = .04$).

4. Discussion

To our knowledge, this is the first time that the effect of incidental similarity on children has been evaluated. These results suggest that children, just like adults, are positively influenced by someone with whom they share something in common. To our knowledge, this is also the first time that the effect of incidental similarity on change in food consumption and habits has been evaluated.

Important new findings have emerged from this study. First, we observed that the effect of incidental similarity on behavior occurred after a long time period, whereas previous research examined immediate compliance with a request only (Burger *et al.*, 2004; Guéguen, 2015; Martin & Guéguen, 2013). Our findings suggest that similarity could have a long-term effect on people's behavior, which would indicate that people's positive perception of a similar individual (Finch & Cialdini, 1989; Jiang *et al.*, 2010) persists and operates even after a long time. This could explain why several studies have shown that incidental mimicry operates in computer-mediated communication where there is a delay between the reception of a request coming from an unknown similar individual and the time when the participants respond to the solicited request (Guéguen *et al.*, 2005; Martin *et al.*, 2013; Oates & Wilson, 2002).

Second, we also found that participants in the incidental similarity condition had changed their own preferences for some food items; they said they liked more the vegetables they usually disliked and that their general perception of vegetables had changed. These results suggest that incidental mimicry increases people's positive perception of similar individuals, as reported in previous research (Finch & Cialdini,

1989; Jiang *et al.*, 2010), but incidental mimicry also leads people to behave in such a way that they will be perceived more positively by their similar counterpart. Congruent with this interpretation, we found that the children in the incidental similarity condition expressed having enjoyed the survey more than those in the control condition. Thus, we could assume that the children in the incidental similarity condition wanted to please the instructor, so they expressed more interest in vegetables afterwards. This would suggest that incidental similarity operated not simply because the participants were led to think that the instructor's attitudes and values were like their own values and attitudes but that the participants changed their own attitudes and values in order to adjust them to the attitudes and values of the similar individual (i.e., the instructor). Thus, if similarity creates closeness between two individuals (Heider, 1958), people also change their own attitudes and values to enhance the closeness with similar individuals.

This study presents some practical interest, given the fact that creating incidental similarity is easy to carry out in social relationships. Birthdate similarity is probably neither the best nor the only way to create similarity; incidental similarity can be created in multiple ways (places where people have lived in the past, food preferences, etc.). Our findings have shown a positive change in children's consumption and perception of disliked food, thus indicating that incidental similarity could be a good way to change individuals' food habits and probably other habits.

This study has several limitations. In this experiment, the sample was limited to 8-9-year-old children, and all the instructors were women. Thus, replications of this study using children of various ages and male instructors are now necessary. In this situation, we examined only one method to create incidental similarity (a similar birthdate), but research has shown that other methods exist (Burger *et al.*, 2044; Guéguen *et al.*, 2011), and that uncommon, incidental similarity exerts more effect (Burger *et al.*, 2044). Thus, in future studies, it would be worth examining the various cues that create incidental similarity.

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Conflict of Interest Statement

By the following, we declare that there are no conflicts of interest.

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Dr. Angélique Martin (PhD) is an associate professor of social psychology at the Université Bretagne-Sud. Her research focuses on the effect of imitation and its link to behavior change, particularly in children.

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