# Improving the Perception of the Police by the Youth* 

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#### Abstract

While previous research has highlighted the positive consequences of a high trust in the police, parts of the French population exhibit a lack of trust toward the police. In this paper, I use a lab-in-the-field experiment in two high-schools in France to investigate the effect of a brief and controlled discussion - contact - between police officers and students on trust. Results indicate a positive effect of contact on trust at the individual level, i.e. toward the specific police officer met. The magnitude corresponds to an increase of approximately 0.4 standard deviation. However, the effect fails to translate to an increase in the police in general. A theoretical model of belief formation can shed light on why a single contact cannot be sufficient in case of prior - negative - interactions. This paper has implications for the most widely used policy to improve the perception of the police, namely community policing.


[^0]
## 1 Introduction

The relationship between the police and parts of the population is tense in many countries, with demonstrations explicitly against the behavior of the police regularly making news headlines, sometimes even escalating to violence. Previous research has shown that trust in the police is particularly low for some segments of the population, especially the less well-off and minority citizens (Eurostat, 2015). France is no exception, with significantly lower levels of trust in the police for populations in poor twons around Paris (Roux, 2017). Yet, trust in the police is an essential part of well-functioning societies, as higher trust in the police has been associated with higher legitimacy and effectiveness of police actions (Lyons, 2002; Sunshine and Tyler, 2003; Goldsmith, 2005; Carr et al., 2007) and better capacity of the state to provide basic citizen security (Goldsmith, 2002; Desmond et al., 2016). Moreover, the literature has highlighted the possibility for the perception of the police to change, due to exogenous events. This change can be either positive (Jobard, 2016) or negative (Katz, 2014; Adam-Troian et al., 2020).

The three facts combined - low trust in the police for parts of the population, trust in the police is a public good and trust in the police can be modified - highlight the possibility to look for policy tools to improve the perception of the police. In the literature, the main policy tool identified to increase trust is to create personal contact (Allport, 1954; Bertrand and Duflo, 2017). The idea behind the contact hypothesis is that direct interactions (or contacts) improve the perception of individuals met from an out-group (here, the police) and, in turn, improve trust toward the outgroup in general. Contact is also a central component of community policing, the most common policy applied by central and local governments to improve the perception of the police.$^{1}$

In the present paper, I present the results from a pre-registered experiment ${ }^{2}$ in which I use the methodology from the social psychology literature (Aron et al. 1997) to investigate whether face-to-face discussions between police officers and high-school students in relatively poor towns near Paris can increase trust.

In the experiment, subjects are randomly paired with either a Bachelor student from the area (representing the in-group) or a police officer, and are then randomly assigned to one of three

[^1]treatments: a control group in which subjects are not told any information about the person they are paired with; a photo treatment, in which subjects are presented the photo of their pair; and a contact treatment, in which students talk for 10 minutes with their pair. The treatment is an adaptation of the "fast-friend" procedure (Aron et al. 1997) for quickly generating closeness: we ask pairs to alternately answer questions which become more and more intimate.

Using lab-in-the-field outcome measures, I find that the contact protocol has a positive effect on the amount sent in a trust game with the specific police officer met. The effect is statistically significant and the magnitude is relatively large - corresponding to an increase of approximately 0.4 standard deviations. However, I find no effect at the collective level: subjects in the control group do not send more tokens in a trust game played with a randomly-selected police officer, nor do they show less bias against the police in a novel Implicit Association Test.

This paper contributes to two strands of literature. First, it contributes to the literature on methods to improve police-population relations. For instance, Peyton et al. (2019) find that a brief visit of a police officer to citizens' doors to discuss methods of improvement of policing in their neighborhoods improves the perception of the police. The fact that no effect is found at the collective level could be an indication that discussions about policing are necessary to translate the effect towards the out-group in general, although this result would need to be confirmed by future research. Regarding the recurring political debate about proximity or community policing, results from the present paper imply that the contact can improve relations at the individual level, and might be an argument in favor of having officers patrolling the same neighborhoods regularly.

Second, I contribute to the literature on the contact hypothesis. I show that even a brief, cheap and easy to replicate contact can have a positive effect on trust at the individual level, which is an advantage relative to previous protocols which were much longer in time, and therefore potentially difficult to scale-up (Scacco and Warren, 2018; Mousa, 2020; Lowe, 2021). This paper is also one of the first attempts to illustrate theoretically why the effect at the individual level does not translate to the out-group, in particular if participants have had several (potentially negative) interactions with out-group members (Page-Gould et al., 2008; Clochard et al., 2021).

The remainder of the paper is organized as follows. In section2, I review the relevant literature in police-population relations and the contact hypothesis. In section 3, I present the experimental design of the experiment I conducted and the data. I present empirical results, as well as a
theoretical framework which can explain some findings in section 4. Section 5 concludes.

## 2 Literature review

This paper is linked to two main strands of literature: the first is the literature on trust in the police by the population, the second is the literature on the contact hypothesis.

### 2.1 Police-population relations

While the economic literature on police-population relations is relatively scarce ${ }^{3}$ a relatively large number of papers tackle this issue in the sociology and social psychology literature (see for instance Brown and Benedict (2002); Hagan et al. (2005) Bolger et al. (2021) for a detailed meta-analysis). In general, this literature focuses on finding factors, such as socioeconomic status, age or race which correlate with trust or satisfaction in the police. In particular, the literature has found that trust in the police tends to be lower for individuals who are younger, economically disadvantaged and from minority groups ( $\mathrm{Roux}, 2017$, Roché et al., 2020). The (experimental) literature on how to improve trust in the police, however, is scarce.

Moreover, it has been shown using exogenous events that trust in the police is not constant over time. For instance, in the French context, Jobard (2016) highlighted that following the Paris terrorist attacks of 2015, trust in the police increased significantly, while Adam-Troian et al. (2020) found that after incidents involving the police during demonstrations of the Yellow Vests movement, trust in the police had decreased for demonstrators. Similar results have been found for negative events involving police officers in other parts of the world.$^{4}$ Moreover, Simpson (2021) shows that simply displaying pictures of smiling police officers improves the perceptions of these officers, relative to neutral faces. The fact that trust in the police is malleable represents an opportunity for policy, as it implies that it might be possible to find policy tools to increase trust in the police. In this paper, I contribute by showing that trust in police officers can be purposefully changed.

In this regard, using contact is relevant for two reasons. First, contact has been widely viewed in

[^2]the discrimination and prejudice literature as the main policy tool to reduce prejudice and increase trust (Bertrand and Duflo, 2017; Paluck et al., 2019). Second, meetings with the population outside the "standard" interactions with the police - search and arrests - are a central piece of a policy which has been implemented in many parts of the world, namely community policing. However, there is little experimental evidence about the effect of community policing policies on citizens' trust in the police. There are two main exception. The first exception is Peyton et al. (2019) who investigate the effect of an intervention by the New Haven, CT police department, in which patrol officers went door-to-door to gather information from the public about how they felt the image of the police could be improved. They found that this intervention significantly improved the views of the population. The second exception is Blair et al. (2020) who investigate several community policing initiatives in the Global South, and find very limited effects on public perceptions of the police, measured through surveys. The present paper contributes to this literature by directly investigating the effects of a discussion between high-school students and police officers on the perceptions of the police officers in question, and of the police force in general.

### 2.2 Contact hypothesis

The second strand of literature the present paper contributes to is the literature on the contact hypothesis. The hypothesis was first coined by Gregory Allport in 1964, stating that "Under specific conditions, personal contact can reduce prejudice and increase trust" (Allport, 1954). The following decades saw a lot of descriptive papers trying to assess the validity of the hypothesis, but until the late 2010s, this literature lacked experimental evidence and therefore suffers from potential significant biases (Pettigrew and Tropp, 2006; Paluck et al., 2019).

Since then, a growing number of experiments or quasi-experiments have been analyzed and have highlighted the potential of contact interventions to improve cross-group relations in different contexts. In the context of education, Rao (2019) showed that an intervention to increase the share of poor pupils in primary schools in Delhi improved their perception by better-off children; Scacco and Warren (2018) found that having students perform tasks with members of another religion in Nigeria reduced discrimination and increased generosity towards the out-group; Boisjoly et al. (2006) and Corno et al. (2019) found that having a Black roommate reduces White students'
prejudice in an American and South African University, respectively. Another context in which the contact hypothesis has been studied is through army recruits: Carrell et al. (2015) found that White recruits of the US Air Force Academy are more likely to choose a Black roommate for the second year if they had a Black recruit in their squadron; Finseraas et al. (2019) found an increase in trust for a generic minority after having a minority roommate during training; Cáceres-Delpiano et al. (2021) find that Spanish men born in regions with a weak Spanish identity who served their military service in another region have increased identification as Spanish. The last main context in which contact interventions have been applied is sports, with Mousa (2020) finding that after playing in mixed-religious teams, Iraqi Christians are more tolerant towards the Muslim players of their teams, although the effect, as in the present paper, does not translate to the out-group in general. Lowe (2021) found that playing in mixed-caste teams increases cross-caste friendships and trade efficiency, but adversarial contact (playing against other-caste teams) reduces these effects. Meta-analytic work (Paluck et al., 2019) has shown that on average, contact seems to be effective at reducing prejudice and discrimination, at least towards members of the out-group participants specifically met.

However, as highlighted in a recent review (Paluck et al., 2021), the literature on contact suffers from four main limitations. The first limitation of the literature is the small sample sizes in most interventions. My sample consists of more than 360 students, thus putting the present paper in the top fifth of sample sizes as counted by the review. A second limitation of the literature is to focus on survey measures, with no repercussion for dishonest answers, and therefore potentially suffering from experimenter-demand effect (Zizzo, 2010). In this paper, I use an incentivized outcome specifically the trust game (Berg et al., 1995) - and an Implicit Association Test (Greenwald et al., 1998), in which participants are primed to answer as quickly as possible, not on the outcome of the test (which would be subject to experimenter demand effect). The third and perhaps most significant limitation of the literature is the difficulty to replicate the setups in which the studies were conducted. For instance, the sports league conducted by Mousa (2020) and Lowe (2021) lasted for several weeks, it might be complicated to have entire populations joining the military as in Carrell et al. (2015) or Finseraas et al. (2019). The protocol presented in the present paper, which is an adaptation of Aron et al. (1997), is more replicable as it is much shorter, and does not require elaborate settings. The fourth and final limitation of the literature on the contact hypothesis is the
lack of a general theoretical framework of why contact may have an effect. This paper contributes to this in proposing a model of belief formation which can explain why contact can have an effect at the individual level, which, however, fails to translate to the out-group in general, a result that has been found in the literature (Mousa, 2020; Clochard et al. 2021).

## 3 Experimental Design and Data

Context The experiment took place in March 2021 in two high-schools in the Paris region, in the towns of Saint-Denis and Corbeil-Essonnes (see a map in Appendix A). The high-schools were selected because they are located in towns which are relatively impoverished ( $37 \%$ and $26 \%$, respectively, of the population live below the national poverty rate, relative to $15 \%$ nationwide), with a large share of immigrants $\$^{5}$ ( $39 \%$ and $27 \%$, respectively, relative to $9.6 \%$ nationwide) and have a population which is relatively younger than the rest of the country (about $45 \%$ of residents are below 29 years old in both towns, relative to $30 \%$ for the whole country). According to the literature, the population of these towns are therefore likely to distrust police more than the country average ( Roux, 2017; Roché et al., 2020). Indeed, clashes between parts of the population and police officers have occurred in the past in both towns.

Setup In accordance with high-school administrations, participation was mandatory for students (provided the teacher had given their approval), and sessions were conducted during school time. The sample consisted in 366 high-school students, which were on average 17 years old and were selected from all curricula (general, technological and professional). Participants, being minors, were not financially compensated, but they were incentivized using grades. At the end of the experiment, one game was selected at random and determined the number of tokens earned by each participant. The higher the number of tokens, the higher the grade. Participants were guaranteed a show-up grade of 10 out of 20 . For each additional token, half a point was awarded.

The data was collected on tablets using the o-Tree software (Chen et al., 2016).

[^3]Treatments Upon arrival, students were randomly allocated to one of three treatment arms. The first treatment arm $(N=92)$ is a control, the second $(N=145)$ is the Photo treatment, and the third ( $N=129$ ) is the Contact treatment. In the Photo and Contact treatment arms, subjects were paired either with a police officer or with a first-year university student who grew up in Paris' suburbs. Treatments are summarized in Figure 1. The treatments resemble the protocol set up in a previous paper (Clochard et al., 2021).


Figure 1: Treatment arms

In the Contact treatment, participants met their pair face to face, and both alternately answer progressively more personal questions. The questions are drawn from the methodology used by Aron et al. (1997), which has been proven to create friendships very quickly. The original protocol is adapted so that discussions last 10 minutes. In details, each pair has to answer one question from each of the three sets of questions from Aron et al. (1997). All questions are presented in Appendix $B$, and the questions they had to answer were drawn at random within each set.

In the Photo treatment, participants are shown the photo of their pair, and told whether their pair is a police officer or a student. The Photo treatment enables to observe the difference between trust in a police officer and trust in a student.

In the Control group, participants are not told who they are going to play with - they are told that they are not playing with someone from the class.

Outcomes As stipulated in the pre-analysis plan, the analysis focuses on three primary outcomes. The first outcome is a standard Trust Game (Berg et al. 1995). In the trust game, participants -
playing the role of the truster are endowed with 10 tokens. They choose a number of tokens to be sent to the other player. Each token is then multiplied by 3, and the other player - the trustee - chooses how many tokens to send back to the truster. The measure of trust used is the share of tokens sent by the truster, with an increase associated with a higher degree of trust. The first outcome - Trust Pair - is the result of the game played with the pair. This outcome captures the effect of contact on trust towards the individual met.

The second outcome - Trust Police - is again measured via a Trust Game, with a random policeman. Specifically, they were told that a group of police officers from the Paris region - Ile-de-France - have played the trust game with high-school students from Paris' suburbs and have declared how many tokens they are willing to send back for each possible amount of tokens sent. One of their answers has been randomly selected and will be used to determine the participant's gains. This outcome is used to test the effect of contact on the police as a whole, not specifically on the individual met.

The third outcome is the result of a novel version of the Implicit Association Test (Greenwald et al., 1998) - a measure commonly used in social psychology to measure implicit stereotypes, regarding ethnicity, race, gender, sexual identity or disability - in which the two categories compared were the police and health services. Participants were instructed to associate as fast as possible (but without mistakes) images of the police and health services with either negative or positive words. First - after some training rounds - participants were instructed to associate the police with negative words, and health services with positive rounds. Second - after some more training rounds - the places for the police and health services were reversed. The outcome used - IAT - is the difference between the two response times, divided by the standard deviation of times from a pilot study with a different class in the first high-school. The variable is coded so that a higher IAT variable is associated to a stronger association between police images and positive words ${ }^{6}$. The variable is used to test the effect of contact on subconscious association of the police to bad or good.

Estimation strategy I estimate a cross-treatment OLS regressions for each of the three outcomes (Equation 1) . The dependent variables are the two treatments (Contact and Photo) and an interaction of each treatment and a dummy equal to 1 if the participant is paired with a police officer.

[^4]Because in the control treatment, participants are not told anything about the participants, the variable Police is by default set to 0 . This means that the $\beta_{2}$ coefficient in Equation 1 identifies the interaction between the Photo treatment and the Police variable. Standard errors are clustered at the class level.

Controls include age, education and whether the participant was victim of a set of crimes and misdemeanors. I also included a question known as an instructional manipulation check, typically used in online experiments (Hauser and Schwarz, 2016), used to measure attention.7

$$
\begin{align*}
Y= & \alpha+\beta_{1} \text { Contact }+\beta_{2} \text { Police }+\beta_{3} \text { Contact } \times \text { Police } \\
& +\beta_{4} \text { Photo }+\gamma X+\epsilon \tag{1}
\end{align*}
$$

Discussion of protocol There are several points which might need to be clarified regarding the protocol I implemented. First, participating police officers are clearly a selected sample and not representative of the police force. All participating officers are members of an association which aims at improving the dialogue between the police and citizens, meaning that it is relatively safe to assume that they have a more proactive attitude to discussions than the average police officer. This fact can be a threat for the interpretation of the results, in particular with respect to the external validity of the protocol. However, it can also be a strength of the protocol, especially in regards to the theoretical framework presented below, as we can assume that contacts will be positive.

The second point worth highlighting regards the race of police officers and students. The relationship between the race/ethnicity of the population and/or police officers and the perceptions of the police has been a focus of a large share of the police-population relations literature (see for instance Antonopoulos (2003); Hasisi and Weitzer (2007); Brunson and Weitzer (2009)). The context of France is very specific compared to many other countries, particularly the US, because ethnic/racial statistics are forbidden: I therefore do not have any individual information about ethnicity or race $\sqrt[8]{8}$ As mentioned above, it is possible to say though, that both high-schools are

[^5]located in towns with a relatively large share of immigrants.
The third and most significant issue with the present protocol is the fact that all outcomes are measured right after the end of the intervention, and I do not have no measure of outcomes months - or even weeks - after the intervention. The lack of evidence of lasting effects of contact has been identified as a weakness of the contact interventions (Paluck et al., 2021). I originally intended to collect information one month after the intervention for one high-school. However, due to sanitary restrictions to tackle the spread of COVID-19, high-schools in France were closed for the entire month of April 2021, 9 and data collection had to be canceled.

## 4 Results

Descriptive statistics are displayed in Appendix C. On average, participants were 17 years old, with a relative majority of girls ( $60 \%$ ). 35 percent declared at least one negative past encounter experience with the police, and 21 percent declare that they have been discriminated against. One interesting feature is that the sample is relatively inattentive - in the sample, only $54 \%$ correctly answer the instructional manipulation check question, which is a low figure relative to other samples, such as MTurkers (Hauser and Schwarz, 2016).

The treatments are well balanced (Appendix $D$ ) across nearly all characteristics. The only exception relates to the attention variable, with participants in the Contact treatment paying relatively less attention than others.

### 4.1 Primary results

In Table 1. I display the results of the estimations for the three outcomes. In accordance with the pre-analysis plan, I corrected p-values for three one-sided tests, corresponding to a modification of $2 / 3$ of standard $p$-value thresholds.

From column 1 and Figure 2, it appears that the contact has an effect on the amount sent in the trust game played with the person met only if participants met a police officer. The effect is

[^6]significant at the 5 percent level (Corrected $-p=0.044$, and the magnitude is large - corresponding to an increase of 0.38 standard deviation. Being presented a photo of a police officer has a relatively negative effect on trust, although the difference is not significant $(p=0.14)$. Having a contact with a student appears not to have an effect on trust.

The results therefore indicate that contact with a police officer has a positive effect on trust at the individual level - i.e. towards the specific police officer met. However, these positive results are not carried over to a change in actions towards the police in general, as captured by the results presented in columns 2 and 3 of Table 1. Column 2 and Figure 3 presents treatment effects for the trust game played with a "random" police officer, while column 3 and figure 4 present the treatment effects on the Implicit Association Test. The effect of contact with a police officer is in both cases positive, but the effect is clearly insignificant.

In the following section, I present an exploratory theoretical framework to understand how contact can have a positive effect at the individual level but this effect is not translated at the collective level.


Figure 2: Average amounts sent in the trust game played with the pair

### 4.2 Theoretical framework and empirical test

In this section, I develop a model of belief formation which could explain why contact can have an effect at the individual level - an increase of trust toward the specific police officers met - but

Table 1: Treatment effect on primary outcomes

|  | (1) <br> Trust Pair | (2) <br> Trust Police | $\begin{gathered} \text { (3) } \\ \text { IAT } \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| Contact | $\begin{array}{r} 0.031 \\ (0.040) \end{array}$ | $\begin{aligned} & \hline-0.001 \\ & (0.032) \end{aligned}$ | $\begin{gathered} -0.274 * \\ (0.143) \end{gathered}$ |
| Police | $\begin{array}{r} -0.050 \\ (0.033) \end{array}$ | $\begin{gathered} -0.008 \\ (0.042) \end{gathered}$ | $\begin{array}{r} 0.061 \\ (0.167) \end{array}$ |
| Contact $\times$ Police | $\begin{gathered} 0.086^{* *} \\ (0.038) \end{gathered}$ | $\begin{array}{r} 0.013 \\ (0.062) \end{array}$ | $\begin{array}{r} 0.022 \\ (0.400) \end{array}$ |
| Photo | $\begin{array}{r} 0.023 \\ (0.034) \end{array}$ | $\begin{array}{r} -0.010 \\ (0.043) \end{array}$ | $\begin{array}{r} -0.134 \\ (0.166) \end{array}$ |
| Constant | $\begin{array}{r} 0.427 \\ (0.309) \end{array}$ | $\begin{array}{r} 0.088 \\ (0.289) \end{array}$ | $\begin{array}{r} 0.294 \\ (0.983) \end{array}$ |
| Controls | Yes | Yes | Yes |
| $R^{2}$ | 0.091 | 0.071 | 0.077 |
| No. obs | 359 | 359 | 359 |
| Mean Control | 0.338 | 0.385 | -0.665 |
| Std dev. Control | 0.223 | 0.236 | 0.627 |

Corrected p-values for three one-tailed tests: * $\mathrm{p}<0.10$, ${ }^{* *} \mathrm{p}<0.05$, ${ }^{* * *} \mathrm{p}<0.01$. In column 1 , the outcome variable is the amount sent in the trust game with the individual met, in column 2 , the outcome is the amount sent in a trust game with a random police officer. In column 3, the outcome is the result of the Implicit Association Test. Controls include gender, level of education, age, indicators of whether the participant was victim of certain crimes and misdemeanors and the level of attention. Standard errors are clustered at the class level.


Figure 3: Average amounts sent in the trust game played with a random policeman


Figure 4: Average difference in response time of the Implicit Association Test. A negative result means that participants took more time associating pictures of the police with positive words than pictures of health services with the same positive words.
the effect is not observed at the collective level - no increase of trust toward the police in general. The main assumption of the model is that individuals have received, prior to the contact, a limited number of signals from the other group.

### 4.2.1 Setup

I assume that an agent - in the experimental setup, a student - has to evaluate the value trustworthiness - of a police officer. The trustworthiness of the police officer is a random variable denoted by $x \in\{0,1\}$, which I assume to be a Bernouilli variable taking the value 1 with a probability $\theta$. I also assume that the parameter $\theta$ is unknown and that it is drawn from a uniform distribution over $[0,1]$. The agent updates her beliefs using Bayes' rule ${ }^{10}$

Prior to the interaction we are focusing on, I assume that the agent has received $n \in \mathbb{N}$ i.i.d. signals (previous interactions with police officers), denoted ( $x_{1}, \ldots, x_{n}$ ).

The likelihood is

$$
\begin{equation*}
p(x \mid \theta)=\theta^{\sum_{i=1}^{n} x_{i}} \times(1-\theta)^{n-\sum_{i=1}^{n} x_{i}} \tag{2}
\end{equation*}
$$

The prior for the value of $\theta$ is $p(\theta)=1$ (uniform distribution).

[^7]Using Bayes' rule, the posterior is therefore

$$
\begin{equation*}
p(\theta \mid x) \propto \theta^{\left(\sum_{i=1}^{n} x_{i}+1\right)-1} \times(1-\theta)^{\left(n-\sum_{i=1}^{n} x_{i}+1\right)-1} \tag{3}
\end{equation*}
$$

The estimated value of $\theta$ thus follows a Beta distribution with parameters $\left(\sum_{i=1}^{n} x_{i}+1, n+1-\right.$ $\left.\sum_{i=1}^{n} x_{i}\right)$ (Figure 5).

The expected value of $\theta$ is

$$
\begin{equation*}
\theta_{n}=\frac{1+\sum_{i=1}^{n} x_{i}}{n+2} \tag{4}
\end{equation*}
$$



Figure 5: Densities of probability for $\theta$, depending on the value of $n\left(\theta=0.5\right.$ and $\left.\frac{\sum x_{i}}{n}=\frac{1}{2}\right)$

### 4.2.2 Effect of contact

I assume that the contact works as a new, independent signal $x_{n+1}$ (perfectly observed) received.

Without contact, the expected trustworthiness of the police officer is the expected value of the parameter $\theta, \theta_{n}$. At the individual level, after contact, the trustworthiness is perfectly observed, therefore the treatment effect at the individual level should be

$$
\begin{equation*}
x_{n+1}-\theta_{n} \tag{5}
\end{equation*}
$$

The new signal changes the estimated value of $\theta$ to a Beta distribution with parameters $\sum_{i=1}^{n+1} x_{i}+$

1 and $n+2-\sum_{i=1}^{n+1} x_{i}$. The expected value of $\theta$ after receiving the $n+1$-th signal becomes

$$
\begin{equation*}
\theta_{n+1}=\frac{1+\sum_{i=1}^{n+1} x_{i}}{n+3} \tag{6}
\end{equation*}
$$

The treatment effect at the collective level - i.e. the difference between estimations of the expected trustworthiness of the group before and after the signal - is

$$
\begin{align*}
\theta_{n+1}-\theta_{n} & =\frac{1+\sum_{i=1}^{n+1} x_{i}}{n+3}-\frac{1+\sum_{i=1}^{n} x_{i}}{n+2} \\
& =\frac{x_{n+1}-\theta_{n}}{n+3} \tag{7}
\end{align*}
$$

The treatment effect at the collective level is thus equal to the treatment effect at the individual level, deflated by a factor $n+3$. The number of prior interactions is therefore predicted to have a major influence on the treatment effect at the collective level (Figure 6).


Figure 6: Difference of the effect of a positive contact $\left(x_{n+1}=1\right)$, depending on the value of $n$

### 4.2.3 Discussion of the model

There are three points worth highlighting regarding the present theoretical framework. First, I assume that the trustworthiness of the police officer is a binary variable. This assumption is a simplification, as the main result - the collective effect being of the same size, but of a smaller magnitude than the individual effect - would hold for any distribution. Second, I assume that the beliefs about the out-group is correct, given all received signals. This assumption therefore excludes potential bias connected to incorrect beliefs (Bursztyn and Yang, 2021) - although it is likely that the expected value of the trustworthiness $\theta_{n}$ differs from the true value $\theta$ due to sampling issues. Third, I assume that all signals, including the contact, are equally weighed by
the agent, which is a standard consequence of the Bayesian updating process. This means that I do not consider non-standard channels which would be path-dependent, such as representativeness (Bordalo et al., 2016, 2021), attention (Kohlhas and Walther, 2021) or overconfidence (Rabin and Schrag, 1999).

### 4.2.4 Empirical relevance of the model

The presented theoretical framework predicts that the effect of contact at the collective level trust towards the police - should be of the same sign as the treatment effect at the individual level trust towards the person met, and the magnitude should be lower.

Although it is difficult to observe directly the number of past interactions with police officers (and especially whether they were positive or not), but in the questionnaire, participants were asked to give the number of identity checks they were subjected to in the past three years. ${ }^{11}$ In what follows, I use the number of identity checks as a lower bound for the number of prior interactions with police officers ( $n$ in the model).

The distribution of answers (Figure 7) is heavily skewed, with approximately 60 percent of respondents declaring they have not been subjected to an identity check, and several participants declaring they had been subject to more than 20 checks. The average value of the number of identity checks is 2.

The prediction of the model is that the effect of contact at the individual level should be $n+3$ times as large as the effect at the collective level. Using $n=2$ as a lower bound, we should therefore observe an individual effect which is a little more than 5 times as large as the collective effect. When comparing the two point estimates, we find that the effect is approximately 6.6 , which is not far from the theoretical prediction (although the point estimates are very noisy).

An additional remark is that if the point estimate is correct, the statistical power of the experiment is simply too small to detect it. Results from a quick sample calculation indicate that in order to be able to detect an effect size of approximately 0.07 standard deviation, the sample required to reach a power of 0.80 is approximately 5,000 observations, or more than 13 times the sample size of this experiment. This experiment in this case is therefore clearly not powered enough to detect

[^8]

Figure 7: Distribution of the number of identity checks in the three years prior to the experiment an effect on contact on trust at the collective level.

### 4.3 Exploratory results

In this section, I present results from estimations which were not included in the pre-analysis plan, but which could be an avenue for future research.

Other measures of trust in the police In Table 2, I analyze the effect of contact with a police officer on stated measures of trust in the police. In the first three columns, participants were asked to state whether they agree with several statements. In column 1, participants were asked whether, should they be victim of a crime, they would be certain of reporting it to the police. In column 2, they were asked whether they believe the career of police officer to be honorable. In column 3, they were asked whether they are considering becoming a police officer in the future. In column 4, they were asked whether they believe the police to be violent - the outcome in Table 2 is reversed so as to move in the same direction as the other outcomes.

As can be seen in Table 2, results indicate that the treatment has no effect on these measures of beliefs about police quality. This result is another indication that contact does not appear to have an effect on the police in general.

Table 2: Treatment effect on views of the police

|  | $(1)$ |  | $(2)$ |  |
| :--- | ---: | ---: | ---: | ---: |
| Likelihood to report | (3) | $(4)$ |  |  |
|  | 0.003 | 0.179 | 0.101 | -0.060 |
| Contact | $(0.142)$ | $(0.114)$ | $(0.092)$ | $(0.096)$ |
|  | 0.121 | 0.102 | 0.032 | 0.087 |
| Police honorable | Police career | Police non violent |  |  |
|  | $(0.169)$ | $(0.171)$ | $(0.086)$ | $(0.139)$ |
| Contact $\times$ Police | -0.279 | 0.084 | 0.197 | 0.147 |
|  | $(0.171)$ | $(0.197)$ | $(0.212)$ | $(0.153)$ |
| Photo | -0.058 | -0.033 | 0.017 | -0.140 |
|  | $(0.146)$ | $(0.128)$ | $(0.071)$ | $(0.103)$ |
| Constant | $2.521^{* *}$ | $4.470 * * *$ | 1.009 | $3.461^{* * *}$ |
|  | $(1.096)$ | $(0.838)$ | $(0.711)$ | $(1.009)$ |
| $R^{2}$ | 0.109 | 0.080 | 0.108 | 0.101 |
| No. obs | 359 | 359 | 359 | 359 |
| Mean Control | 3.022 | 2.750 | 1.141 | 2.522 |
| Std dev. Control | 0.877 | 0.721 | 0.434 | 0.718 |

* $\mathrm{p}<0.10,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. For columns 1 through 3 , the outcome is a variable from 1 to 4 on whether participants agree with the statement. In column 1, the statement is: Imagine in the future you are victim of theft. You are certain to report it to the police. In column 2, the statement is: I believe that police officer is an honorable career. In column 3, the statement is: I am considering a career as a police officer for my future. In the last column, the statement was: I believe police officers are violent. The outcome presented here is the opposite of the answer of participants (i.e. their disagreement with the statement). Standard errors are clustered at the class level.


Figure 8: Coefficients of Contact $\times$ Police in quantile regressions. The dotted lines represent $95 \%$ confidence intervals.

Heterogeneity analysis Results from an heterogeneity analysis, with respect to prior police interactions and gender, are presented in Table 3. In the Table, the variables of interest are the triple interactions of Contact, Police and the heterogeneous variable.

In column 1 the heterogeneity variable is gender. Results on the main treatment effect become insignificant, and the treatment effect seem not to vary much on gender.

Results with police controls, presented in column 2, are more interesting. The variable of heterogeneity is a dummy variable on whether participants have had any identity controls over the past three years. Although insignificant, the indicate that the treatment effect is reduced for participants subject to identity controls, with the coefficients Contact $\times$ Police and Contact $\times$ Police $\times$ Controls almost canceling each other entirely.

In Figure 8 are plotted the coefficients of the quantile regressions for the Contact $\times$ Police variable. The dependent variable is the share of tokens sent in the trust game played with the pair. The estimations indicate that there is no significant difference between deciles.

Table 3: Heterogeneous treatment effect

|  | $(1)$ | $(2)$ |
| :--- | ---: | ---: |
|  | Gender | Police interactions |
| Contact | 0.036 | 0.006 |
|  | $(0.062)$ | $(0.047)$ |
| Police | -0.071 | -0.058 |
|  | $(0.063)$ | $(0.042)$ |
| Contact $\times$ Police | 0.101 | $0.124^{*}$ |
|  | $(0.088)$ | $(0.063)$ |
| Controls |  | -0.041 |
|  |  | $(0.042)$ |
| Police $\times$ Controls |  | 0.014 |
|  |  | $(0.060)$ |
| Contact $\times$ Police $\times$ Controls | -0.102 |  |
|  |  | $(0.111)$ |
| Female | -0.082 |  |
|  | $(0.051)$ |  |
| Police $\times$ Female | 0.027 |  |
|  | $(0.072)$ |  |
| Contact $\times$ Police $\times$ Female | -0.018 | $(0.033)$ |
|  | $(0.127)$ | 0.441 |
| Photo | 0.024 | $(0.305)$ |
| Constant | $(0.036)$ | 0.088 |
|  | 0.496 | 359 |
| $R^{2}$ | $(0.316)$ | 0.338 |
| No. obs | 0.083 | 0.223 |
| Mean Control | 359 |  |
| Std dev. Control | 0.338 | 0.223 |

* $\mathrm{p}<0.10,{ }^{* *} \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. The outcome variable is the trust in the pair. Female is coded as 1 for girls, 0 for boys. Standard errors are clustered at the class level.


## 5 Conclusion

In this paper, I test the effect of a brief contact, borrowing from the highly replicable "fastfriend" procedure (Aron et al. 1997), between police officers and high-school students in two French high-schools. I show that the level of trust toward the specific police officer met (what I call in the paper the effect of contact at the individual level) is significantly positive, and the magnitude of the effect is important (corresponding to a 0.39 deviation increase).

However, the positive effect of contact at the individual level fails to translate at the collective level, either using a measure of trust towards a random police officer, or with a novel measure of an Implicit Association Test. The theoretical framework presented in section 4 can help understand this fact, with a decrease of contact effects due to prior interactions with police officers.

The results presented above - contact having a positive effect at the individual level but no effect at the collective level - point an avenue for future research on the contact hypothesis. In particular, there is a lack of consistency of results regarding the effect of contact at the collective level: in several contexts, contact has been found to have a positive effect towards the out-group in general (Carrell et al., 2015, Corno et al., 2019, Lowe, 2021) while in other contexts the positive effects of contact have been found only for the out-group members specifically met (Mousa (2020); Clochard et al. (2021); the present paper). Further efforts should be made to understand what factors (context, nature and/or duration of contact, representativeness of met out-group members, etc) can translate the positive effects of contact to out-group members in general. The theoretical framework presented here, showing that a crucial factor seems to be pre-existing interactions with the out-group, could be a first step in this direction.

Another important avenue for future research is the literature on the contact hypothesis is to further investigate how contact can change perceptions. As presented in section 4.3, it does not appear that the change in behavior can be attributed to a change in the beliefs about the quality of the police. In Appendix E, I present preliminary results from estimations of a change in beliefs and altruism due to the treatment. Although the results presented here are insignificant, it could be a first step to understand channels through which contact is effective.

Moreover, taken at face value, the results presented in this paper also highlight a potential benefit of community policing policies. Community policy typically entails having specific police
officers routinely patrolling the same neighborhoods and interacting with citizens on issues outside the scope of standard law enforcement. If the results from the present paper replicate to these situations, community policing policies have the potential to increase trust toward these specific police officers, which in turn could be a potential benefit to local communities, as trust in police officers has been shown to increase the probability to contact police when a crime has been committed (Carr et al., 2007).

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## Appendices

## A Experiment location



Figure A.1: Locations of the two high-schools

## B Questions for the Contact treatment

## B. 1 Set I (light closeness)

1. Given the choice of anyone in the world, whom would you want as a dinner guest?
2. Would you like to be famous? In what way?
3. Before making a telephone call, do you ever rehearse what you are going to say? Why?
4. What would constitute a "perfect" day for you?
5. When did you last sing to yourself? To someone else?
6. If you were able to live to the age of 90 and retain either the mind or body of a 30 -year-old for the last 60 years of your life, which would you want?
7. Do you have a secret hunch about how you will die?
8. Name three things you and your partner appear to have in common.
9. For what in your life do you feel the most grateful?
10. If you could change anything about the way you were raised, what would it be?
11. Take 4 minutes and tell your partner your life story in as much detail as possible.
12. If you could wake up tomorrow having gained any one quality or ability, what would it be?

## B. 2 Set II (intermediate closeness)

13. If a crystal ball could tell you the truth about yourself, your life, the future, or anything else, what would you want to know?
14. Is there something that you've dreamed of doing for a long time? Why haven't you done it?
15. What is the greatest accomplishment of your life?
16. What do you value most in a friendship?
17. What is your most treasured memory?
18. What is your most terrible memory?
19. If you knew that in one year you would die suddenly, would you change anything about the way you are now living? Why?
20. What does friendship mean to you?
21. What roles do love and affection play in your life?
22. Alternate sharing something you consider a positive characteristic of your partner. Share a
total of 5 items.
23. How close and warm is your family? Do you feel your childhood was happier than most other people's?
24. How do you feel about your relationship with your mother?

## B. 3 Set III (intensive closeness)

25. Make three true "we" statements each. For instance, "We are both in this room feeling..."
26. Complete this sentence: "I wish I had someone with whom I could share..."
27. If you were going to become a close friend with your partner, please share what would be important for him or her to know.
28. Tell your partner what you like about them; be very honest this time saying things that you might not say to someone you've just met.
29. Share with your partner an embarrassing moment in your life.
30. When did you last cry in front of another person? By yourself?
31. Tell your partner something that you like about them already.
32. What, if anything, is too serious to be joked about?
33. If you were to die this evening with no opportunity to communicate with anyone, what would you most regret not having told someone? Why haven't you told them yet?
34. Your house, containing everything you own, catches fire. After saving your loved ones and pets, you have time to safely make a final dash to save any one item. What would it be? Why?
35. Of all the people in your family, whose death would you find most disturbing? Why?
36. Share a personal problem and ask your partner's advice on how he or she might handle it. Also, ask your partner to reflect back to you how you seem to be feeling about the problem you have chosen.

## C Descriptive statistics

Table C.1: Descriptive statistics

| Variable | Mean | Std. Dev. | Min. | Max. | N |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Panel A. Primary outcomes |  |  |  |  |  |
| Trust Pair | 0.351 | 0.226 | 0 | 1 | 366 |
| Trust Police | 0.374 | 0.239 | 0 | 1 | 366 |
| Trust Youth | 0.363 | 0.236 | 0 | 1 | 366 |
| Difference Trust Game | -0.012 | 0.239 | -1 | 0.700 | 366 |
| IAT | -0.813 | 0.987 | -7.48 | 2.79 | 366 |
| Panel B. Secondary outcomes |  |  |  |  |  |
| Expected amount sent back Pair | 4.724 | 4.092 | 0 | 30 | 366 |
| Expected amount sent back Police | 4.88 | 4.419 | 0 | 30 | 366 |
| Expected amount sent back Youth | 4.197 | 3.801 | 0 | 25 | 366 |
| Difference Expected | -0.683 | 4.389 | -27 | 18 | 366 |
| Altruism Dictator | 3.292 | 2.404 | 0 | 10 | 366 |
| Altruism police | 0.661 | 0.474 | 0 | 1 | 366 |
| Panel C. Controls |  |  |  |  |  |
| Gender | 0.596 | 0.491 | 0 | 1 | 359 |
| Age | 17.112 | 0.781 | 15 | 20 | 366 |
| Education | 5.522 | 2.077 | 1 | 8 | 366 |
| Negative past experience with police | 0.347 | 0.477 | 0 | 1 | 366 |
| Victim theft with violence | 0.107 | 0.309 | 0 | 1 | 366 |
| Victim theft without violence | 0.131 | 0.338 | 0 | 1 | 366 |
| Victim violence | 0.082 | 0.275 | 0 | 1 | 366 |
| Victim sexual violence | 0.063 | 0.243 | 0 | 1 | 366 |
| Victim threats | 0.161 | 0.368 | 0 | 1 | 366 |
| Victim insults | 0.41 | 0.492 | 0 | 1 | 366 |
| Victim scam | 0.167 | 0.373 | 0 | 1 | 366 |
| Victim discrimination | 0.208 | 0.406 | 0 | 1 | 366 |
| Attention | 0.536 | 0.499 | 0 | 1 | 366 |
| Nb controls | 1.918 | 6.034 | 0 | 60 | 366 |

## D Balance across treatments

Table D.1: Balance across treatments

|  | Mean control | Mean photo | Mean contact | Difference control photo | SE | Difference control contact | SE | Difference photo contact | SE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Gender | 0.578 | 0.601 | 0.603 | 0.024 | 0.066 | 0.025 | 0.068 | 0.002 | 0.060 |
| Age | 17.163 | 17.076 | 17.116 | -0.087 | 0.110 | -0.047 | 0.102 | 0.040 | 0.094 |
| Education | 5.587 | 5.407 | 5.605 | -0.180 | 0.292 | 0.018 | 0.282 | 0.198 | 0.241 |
| Negative past experience with police | 0.348 | 0.331 | 0.364 | -0.017 | 0.063 | 0.017 | 0.066 | 0.033 | 0.058 |
| Victim theft with violence | 0.098 | 0.097 | 0.124 | -0.001 | 0.040 | 0.026 | 0.043 | 0.027 | 0.038 |
| Victim theft without violence | 0.109 | 0.110 | 0.171 | 0.002 | 0.042 | 0.062 | 0.048 | 0.060 | 0.042 |
| Victim violence | 0.054 | 0.103 | 0.078 | 0.049 | 0.037 | 0.023 | 0.034 | -0.026 | 0.035 |
| Victim sexual violence | 0.076 | 0.048 | 0.070 | -0.028 | 0.032 | -0.006 | 0.036 | 0.021 | 0.028 |
| Victim threats | 0.130 | 0.186 | 0.155 | 0.056 | 0.049 | 0.025 | 0.048 | -0.031 | 0.046 |
| Victim insults | 0.391 | 0.441 | 0.388 | 0.050 | 0.066 | -0.004 | 0.067 | -0.054 | 0.060 |
| Victim scam | 0.163 | 0.193 | 0.140 | 0.030 | 0.052 | -0.024 | 0.049 | -0.054 | 0.045 |
| Victim discrimination | 0.217 | 0.193 | 0.217 | -0.024 | 0.054 | -0.000 | 0.057 | 0.024 | 0.049 |
| Attention | 0.554 | 0.586 | 0.465 | 0.032 | 0.066 | -0.089 | 0.068 | -0.121** | 0.060 |
| Police controls | 1.098 | 1.793 | 2.643 | 0.695 | 0.683 | 1.546* | 0.800 | 0.850 | 0.825 |
| N | 92 | 145 | 129 |  |  |  |  |  |  |

* $\mathrm{p}<0.10, * * \mathrm{p}<0.05$, *** $\mathrm{p}<0.01$


## E Channels

In accordance with the PAP, I investigates the empirical channels through which contact might affect trust. As stated in List (2020), standard economic theory would expect that any change in actions must be attributed to a change in at least one of three parameters: incentives - how strategies are translated into payoffs-, beliefs - how other players are likely to play and therefore influence the payoff of the agent's own strategy - and/or utility function - how material payoffs are translated into well-being. In this experiment, there is no difference between treatment arms in terms of incentives, as they all play the same games. The channels through which contact could influence behaviors are therefore only either a change in beliefs, or a change in utility function.

## E. 1 Change in beliefs

To measure whether contact has an effect on beliefs, I use an incentivized elicitation of the participants' beliefs about how many tokens the other player will send in the trust game. Specifically, I had participants answer a question about how many tokens they believed the other would send back, and earned a bonus of 5 tokens if their answer falls within two units of the actual answer of the other player.

I elicited participants' beliefs for each Trust Game played, i.e. for the game played with their individual partner - Expected pair -, as well as for that played with a random police officer Expected police.

## E. 2 Change in utility

As a measure of a change in the utility function, I use one parameter which is likely to be affected through contact, namely altruism. To measure altruism at the individual level, I use the standard Dictator Game (Kagel and Roth, 1995), in which each participant has to decide on a split of an endowment of 10 tokens between herself and the other player. The variable Altruism pair is then re-scaled to $[0,1]$ to represent the share of endowment sent to the other player.

To measure altruism at the collective level, I asked participants to choose one of two charities to which to give $2 €$. The first charity is a charity called "L'Oeuvre des Orphelins de la Préfecture de Police", which works at providing help to children of police officers who died on the job.

The choice of the second charity was done during a pilot in February 2021 and involved 16 subjects (which are not part of the final sample). For a number of candidate charities, participants were asked if they prefer the given charity or the police charity. The results of the survey is displayed in table E.1. I decided to use the "Apprentis d'Auteuil" charity in the final questionnaire because the share of respondents favoring this association was the closest to 0.5 . The charity helps struggling adolescents through training, mentoring and help for their career path.

The variable Altruism police is thus a dummy variable with value 1 if the participant chose the police charity, and 0 otherwise.

Table E.1: Choice of charity

| Charity | Domain | Percentage of respondents |
| :---: | :---: | :---: |
| Restos du Cour | Poverty and hunger | 12.5 |
| Association pour la protection des animaux sauvages | Wildilife protection | $6 \overline{8} .8$ |
| Fondation Ablé Pierre | Poverty and housing | 0.0 |
| Apprentis d'Auteuil | Social rehabilitation of youth | 43.8 |
| Ordre de Malte | Poverty and disability | 12.5 |
| Association Prévention Routière | Road safety | 75.0 |

The third column represents the percentage of respondents to the pilot who said they preferred the police charity (Oeuvre des Orphelins de la Préfecture de Police) to the charity in question. Source: Author, based on a pilot study involving 16 participants.

## E. 3 Results

In Table E.2. I present the results from estimations of the treatment effect of contact on each of the secondary outcomes presented above. As can be clearly seen in the table, contact does not have an effect on any presented outcome, neither at the individual nor collective level. This lack of result could come from two reasons: either the true effect is 0 , in which case the channel through which contact affects behavior, or the sample is too small to pick up an effect.

Table E.2: Treatment effect on secondary outcomes to investigate channels

|  | $(1)$ <br> Expected <br> pair | Altruism <br> pair | (3) <br> Expected <br> police | (4ltruism <br> police |
| :--- | ---: | ---: | ---: | ---: |
| Contact | -0.149 | 0.601 | 0.698 | 0.095 |
|  | $(0.181)$ | $(0.663)$ | $(0.435)$ | $(0.494)$ |
| Police | 0.164 | 0.223 | 0.663 | 0.512 |
|  | $(0.173)$ | $(0.478)$ | $(0.476)$ | $(0.685)$ |
| Contact $\times$ Police | -0.012 | 0.755 | 0.564 | -0.636 |
|  | $(0.314)$ | $(0.938)$ | $(0.631)$ | $(1.172)$ |
| Photo | -0.210 | 0.169 | 0.086 | -0.522 |
|  | $(0.193)$ | $(0.565)$ | $(0.521)$ | $(0.652)$ |
| Constant | 0.471 | 7.279 | 0.011 | $11.319^{* *}$ |
|  | $(1.789)$ | $(6.188)$ | $(3.189)$ | $(4.277)$ |
| $R^{2}$ | 0.057 | 0.092 | 0.084 | $0.063^{\dagger}$ |
| No. obs | 359 | 359 | 359 | 359 |
| Mean Control | 0.685 | 4.315 | 2.750 | 5.022 |
| Std dev. Control | 0.467 | 3.706 | 2.375 | 4.019 |

* $\mathrm{p}<0.10, * * \mathrm{p}<0.05,{ }^{* * *} \mathrm{p}<0.01$. In column 1 , the outcome variable is the expected share of tokens sent back by the pair in a trust game. In column 2, the outcome is the amount sent in a dictator game to the pair. In column 3, the outcome is the difference between the expected share sent back by a random police officer or a random high-school student in a trust game. In column 4, the outcome is the probability to select the police association. Controls include gender, level of education, age, indicators of whether the participant was victim of certain crimes and misdemeanors and the level of attention. ${ }^{\dagger}$ : Pseudo- $R^{2}$


## F Difference with the pre-analysis plan

The experiment was pre-registered on the registry for randomized controlled trials in economics held by the American Economic Association (AEA RCT Registry) on February 3, 2021, before the data collection began. The url for the archive is https://www. socialscienceregistry. org/trials/7116.

The paper differs from the pre-analysis plan (PAP, click here) in a few dimensions.

Sample size The PAP was drafted before the administration of the second high-school agreed to participate to the experiment. This enabled me to increase the sample size from the initiallyexpected 200 to 366 .

Removal of the socio-professional category of the parents In the PAP, I mentioned that I would use the socio-professional category of the parents as a control. In the presented analysis, I decided to remove it, in accordance with the missing values section. Indeed, 134 (resp. 112) participants declared either that they did not know the socio-professional category of their father (resp. mother), amounting to 37 (resp. 31) percent of respondents.

## G Questionnaire

## Etude socio-économique

Note: English translations were added for this document. They were not displayed to participants.
Important: Toutes vos réponses seront traitées anonymement. Personne n'aura la possibilité d'identifier directement vos décisions.

A chaque étape, il vous sera demandé de répondre le plus honnêtement possible aux questions qui vous seront proposées.

Pour certaines questions (elles vous seront clairement indiquées), vous avez la possibilité de gagner des jetons. Ces jetons seront convertis, à la fin de l'expérience, en note, suivant la règle suivante : chaque jeton vous rapportera 0.5 point pour votre note.

Pour commencer, vous aurez 15 jetons. Cela signifie que quoi qu'il arrive, votre note ne pourra pas être inférieure à $7,5 / 20$. Vous avez la possibilité de gagner des jetons supplémentaires en fonction de vos réponses.

L'expérience sera décomposée en sept étapes.
A n'importe quel moment, si une question n'est pas claire, ou que vous avez besoin de précisions, n'hésitez pas à le signaler à un responsable.

Important: All your answers will be analyzed anonymously. No one will have the ability to directly identify your answers.

At each step, you will be asked to answer as honestly as possible to questions you will be asked.
For some questions (which will be clearly identified), you will have the possibility to earn tokens. These tokens will be converted, at the end of the experiment, into a grade, with the following rule: each token will earn you 0.5 point.

To begin with, you will earn 15 tokens. This means that, no matter what, your final grade cannot be below 7.5/20. You have the possibility to earn additional tokens, depending on your answers.

The experiment is divided in seven steps.
If, at any point, a question is not clear, or if you need clarification, do not hesitate to signal it to an experimenter.

## Première étape :

First step:

## Règles du jeu 1:

Ce jeu se joue à deux joueurs : vous et un autre joueur.
Vous avez le rôle de l'envoyeur, l'autre joueur a le rôle du receveur.
Chacun d'entre vous reçoit 10 jetons.
Le jeu se joue en trois phases :

1. Vous décidez d'un nombre (entre 0 et 10 ) à envoyer au receveur.
2. Les jetons que vous avez envoyés sont multipliés par 3 par l'examinateur avant d'être donnés au receveur.
3. Le receveur décide alors du nombre de jetons qu'il/elle souhaite vous renvoyer. Le receveur peut donc vous renvoyer un nombre de jetons allant de 0 à la totalité des jetons qu'il/elle a reçus.

## Le gain de chaque joueur correspond au nombre de jetons qui lui reste à la fin de ces trois étapes.

Ainsi, en notant $A$ le nombre de jetons que vous avez envoyés à la première étape, et $B$ le nombre de jetons renvoyés par le receveur, les gains sont les suivants :

- Pour vous, le gain est de $10-\mathrm{A}+B$
- Pour l'autre joueur, le gain est de $10+3 \mathrm{~A}-\mathrm{B}$


## Rules for game 1:

This game plays with two players: you and another player.
You play the sender's role, the other player is the receiver.
You both earn 10 tokens.
The game is played in three phases:

1. You decide of a number of tokens (0 to 10) to send to the receiver.
2. Tokens you send are multiplied by three by the experimenter before being given to the receiver.
3. The receiver decides how many tokens to send back to you. The receiver can send any amount from 0 to all the tokens she received.

Earnings from each player corresponds to the number of tokens at the end of all three steps. Thus, denoting A the number of tokens you sent and $B$ the number of tokens sent back by the receiver, earnings are the following:

- Your earnings are $10-A+B$
- The other player's earnings are $10+3 A-B$

1. Questions de compréhension du jeu 1 (vos réponses ne rentreront pas en compte dans le calcul de vos gains)

Understanding questions for game 1 (your answers will not be included in the computation of your earnings)

| a. | Pouvez-vous envoyer 0 jeton? | 1- Oui 0-Non |
| :---: | :---: | :---: |
|  | Can you send 0 token? | 1-Yes 0-No |
|  | Si le receveur reçoit des jetons, peut-il renvoyer 0 je | 1- Oui 0-Non |
|  | If the receiver earns tokens, can she send 0 token back? | $1-\mathrm{Yes} 0-\mathrm{N}$ |

Si vous envoyez 2 jetons, de combien de jetons le receveur dispose-t-il?
c. If you send 2 tokens, how many tokens does the receiver 1-4;2-6;3-8 have?

Si vous envoyez 2 jetons, le receveur peut-il renvoyer 8
d. jetons?

1- Oui 0-Non
If you send 2 tokens, can the receiver send 8 tokens back?
1-Yes 0-No
Si vous envoyez 4 jetons et que le receveur renvoie 4 jetons, quel est votre gain final (en jetons) ?
e.

If you send 4 tokens and the receiver sends 4 tokens back,
what are your earnings?
f. Et le gain du receveur?

What are the earnings of the receiver?
$1-16 ; 2-18 ; 3-20$
Quel est le nombre maximal de jetons que peut recevoir le receveur de votre part? 1-20;2-30; 3-40
g. What is the maximal number of tokens the receiver can receive from you?

## 2. Cette question peut être prise en compte pour le calcul de vos gains.

 Vous jouez au jeu 1 avec la personne qui vous a été présentée au début de la session.Vous disposez de 10 jetons.
This question can be taken into account to compute your earnings. You are playing game 1 with the person which was presented to you at the beginning of the session. You have 10 tokens.

Combien de jetons souhaitez-vous envoyer à l'autre joueur? How many tokens do you wish to send to the other player?

Nombre entier
Integer
3. Cette question peut être prise en compte pour le calcul de vos gains. Vous avez choisi d'envoyer REPONSE jetons. La personne avec qui vous jouez dispose donc de REPONSE*3 jetons. Nous allons maintenant vous demander de déterminer combien cette personne va vous renvoyer de jetons.
Vos gains seront déterminés comme suit :
Si l'écart entre la valeur que vous choisissez et celle effectivement choisie par la personne avec qui vous jouez est inférieur à 2 jetons, vous gagnerez 5 jetons.

## This question can be taken into account to compute your earnings.

You have chosen to send ANSWER tokens. The other player therefore has ANSWER*3 tokens. We are now asking you to determine how many tokens the other player will send back.
Your earnings will be determined as follows:
If the difference between your answer and the number of tokens truly sent back by the other player is smaller or equal to 2, you will earn 5 tokens.

Combien pensez-vous qu'il/elle va vous renvoyer de jetons?

How many tokens do you think the other player will send back?

Nombre entier entre 0 et REPONSE*3

Integer BETWEEN 0
AND 3*ANSWER


## NE MONTRER CETTE QUESTION QU'AUX TRAITEMENTS PHOTO ET

CONTACT : Sur une échelle de 1 à 7 , à quel point diriez-vous que vous faites confiance à la personne que vous avez rencontrée au

ONLY FOR CONTACT AND PHOTO TREATMENTS: On a scale from 1 to 7 , how much would you say you trust the person you were presented at the beginning of the experiment?

1- Je ne lui fais pas du tout confiance
2-
3-
-

6-

1- I do not trust this person at all ...
7- I trust this person completely
5. NE MONTRER CETTE QUESTION QUE SI LE PARTENAIRE DU SUJET EST UN POLICIER : Pouvez-vous
sélectionner, parmi les réponses ci-dessous, la réponse qui se rapproche le plus de votre sentiment vis-à-vis de l'affirmation suivante

2- Plutôt pas d'accord
3- Plutôt d'accord
4- Tout à fait d'accord

1- Strongly disagree
2- Disagree
3- Agree
4- Strongly agree

Vous avez terminé la première étape.
Vous allez maintenant commencer la seconde étape.
You have completed the first step.
You will now begin the second step.

## Deuxième étape :

Second step:

## Règles du jeu 2:

Ce jeu se joue à deux joueurs : vous et un autre joueur.
Vous disposez de 10 jetons.
Vous décidez d'un nombre de jetons à envoyer à l'autre joueur. L'autre joueur n'a aucune décision à prendre.
À la fin du jeu, vous gardez les jetons que vous n'avez pas envoyés, tandis que l'autre joueur obtient les jetons que vous lui avez envoyés.

## Rules for game 2:

This game plays with two players: you and another player.
You have 10 tokens.
You decide the number of tokens to be sent to the other player. The other player does not have any decision to make. At the end of the game, your earnings are the tokens you did not send, the other player's earnings are the tokens you have sent her.

## 6. Cette question peut être prise en compte pour le calcul de vos gains.

Vous jouez au jeu 2 avec la personne qui vous a été présentée au début de la session. Vous disposez de 10 jetons.
This question can be taken into account to compute your earnings.
You are playing game 2 with the person which was presented to you at the beginning of the session.
You have 10 tokens.

Combien de jetons souhaitez-vous envoyer à l'autre joueur?
How many tokens do you wish to send to the other player?

Nombre entier
Integer

Vous avez terminé la deuxième étape.
Vous allez maintenant commencer la troisième étape.

You have completed the second step.
You will now begin the third step.

## Troisième étape :

Third step:

Dans cette étape, vous allez effectuer un Test d'Associations Implicite (TAI) dans lequel il vous sera demandé de trier des images et des mots en groupes aussi vite que possible.

A la fin de l'expérience, vous recevrez les résultats de ce test, ainsi que des informations sur ce que ces résultats signifient.

In this step, you will perform an Implicit Association Test (IAT) during which you will be asked to sort pictures and words into categories as fast as possible.

At the end, you will receive your IAT result along with information about what it means.

Dans la tâche suivante, un ensemble de mots ou images vous sera présenté et vous devrez classer ceux-ci dans des groupes. Cette tâche requiert que vous classiez ces objets aussi vite que vous pouvez tout en faisant aussi peu d'erreurs que possible. Aller trop lentement ou faire trop d'erreurs rendra votre résultat ininterprétable. Cette partie de l'étude durera environ 5 minutes. Ce qui suit est une liste de mots désignant les items qui forment chacune de ces catégories.

| Catégorie | Items |
| :--- | :--- |
| Bon | Ami, séduisant, heureux, plaisant, souriant, agréable, joyeux, célébrer |
| Mauvais | Désastre, poison, égoïste, horrible, détester, pourri, mal, douleur |
| Police | Images liées à la police |
| Santé | Images liées au secteur de la santé |

In the following task, a number of words or pictures will be presented to you, and you will have to sort them into categories. This task requires you to sort these items as fast as possible while making as little mistakes as possible. Going too slowly or making too many mistakes will render your result uninterpretable. This step of the study will last approximately five minutes. What follows is a list of items in each category.

| Category | Items |
| :--- | :--- |
| Good | Friend, attractive, happy, pleasing, smiling, nice, happy, celebrate |
| Bad | Disaster, poison, selfish, horrible, detest, rotten, evil, pain |
| Police | Pictures linked to the police |
| Health | Pictures linked to health services |

## Gardez à l'esprit

- Gardez votre index gauche proche de la touche de l'écran à gauche, et votre index droit proche de la touche à droite de l'écran afin de pouvoir répondre rapidement.
- Les deux labels au sommet vous indiqueront quels mots ou images vont avec chaque touche.
- Chaque mot ou image a une classification correcte. La plupart de celles-ci sont faciles.
- Le test ne produira pas de résultats si vous allez lentement. Veuillez essayer d'aller le plus vite possible.
- Attendez-vous à faire quelques erreurs parce que vous allez vite. Ce n'est pas grave.
- Pour de meilleurs résultats, évitez les sources de distraction et restez concentré.

Ce test comporte sept (7) parties.
Please keep in mind the following:

- Keep your left hand near the left side of the screen, and your right hand near the right side of the screen so as to answer faster.
- The two labels on top of the screen will indicate which words or pictures go with each side.
- Each word or picture is only associated with one category, easily identifiable.
- The test will not produce any result if you are too slow. Please try to go as fast as possible.
- You are likely to make mistakes. It does not matter.
- For better results, please try to avoid distractions and stay focused.

This test is divided into seven steps.

## CLIQUER SUR «JE SUIS PRÊT A COMMENCER » PLEASE CLICK ON "I AM READY TO BEGIN"

Première partie
Catégorie à gauche : Police
Catégorie à droite : Santé
Instructions:
Appuyez sur la touche de l'écran à gauche pour les items correspondant à la catégorie Police
Appuyez sur la touche de l'écran à droite pour les items correspondant à la catégorie Santé.
Chaque item n'appartient qu'à une catégorie. Les items vont apparaître un à la fois.
Si vous faites une erreur, une croix rouge X apparaîtra. Il vous faudra alors appuyer sur la bonne touche pour continuer.
Allez aussi vite que possible en essayant de ne pas vous tromper.

## First part:

Category on the left: Police
Category on the right: Health

## Instructions:

Please click on the left button for items corresponding to the category Police.
Please click on the right button for items corresponding to the category Health.
Each item only belongs to one category. Items will appear one at a time.
If you make a mistake, a red cross X will appear. You will then have to click on the appropriate button to continue. Please go as fast as possible and try not to make mistakes.

## CLIQUER SUR «C’EST PARTI» PLEASE CLICK ON "LET’S GO "

7. Temps passé à classer

Time spent sorting.
8. Nombre d'erreurs

Number of mistakes.

Deuxième partie
Catégorie à gauche : Mauvais
Catégorie à droite : Bien
Second part:
Category on the left: Bad
Category on the right: Good
9. Temps passé à classer

Time spent sorting.
10. Nombre d'erreurs

Number of mistakes

Troisième partie
Catégorie à gauche : Mauvais ou Police
Catégorie à droite : Bien ou Santé
Third part:
Category on the left: Bad or Police
Category on the right: Good or Health
11. Temps passé à classer

Time spent sorting.
12. Nombre d'erreurs

Number of mistakes

Quatrième partie
Catégorie à gauche : Mauvais ou Police
Catégorie à droite : Bien ou Santé
Fourth part:
Category on the left: Bad or Police
Category on the right: Good or Health
13. Temps passé à classer

Time spent sorting.
14. Nombre d'erreurs

Number of mistakes

Cinquième partie
Catégorie à gauche : Santé
Catégorie à droite : Police
Fifth part:
Category on the left: Health
Category on the right: Police
15. Temps passé à classer

Time spent sorting
16. Nombre d'erreurs

Number of mistakes

Sixième partie
Catégorie à gauche : Mauvais ou Santé
Catégorie à droite : Bien ou Police
Sixth part:
Category on the left: Bad or Health
Category on the right: Good or Police
17. Temps passé à classer

Time spent sorting
18. Nombre d'erreurs

Number of mistakes

Septième partie
Catégorie à gauche : Mauvais ou Santé
Catégorie à droite : Bien ou Police
Seventh part:
Category on the left: Bad or Health
Category on the right: Good or Police
19. Temps passé à classer

Time spent sorting
20. Nombre d'erreurs

Number of mistakes

Vous avez terminé la troisième étape.
Vous allez maintenant commencer la quatrième étape.
You have completed the third step.
You will now begin the fourth step.

## Quatrième étape :

Fourth step:

## Rappel des règles du jeu 1:

Ce jeu est le même que celui auquel vous avez joué au début.
Ce jeu se joue à deux joueurs: vous et un autre joueur.
Vous avez le rôle de l'envoyeur, l'autre joueur a le rôle du receveur.
Chacun d'entre vous reçoit 10 jetons.
Le jeu se joue en trois phases :

1. Vous décidez d'un nombre (entre 0 et 10 ) à envoyer au receveur.
2. Les jetons que vous avez envoyés sont multipliés par 3 par l'examinateur avant d'être donnés au receveur.
3. Le receveur décide alors du nombre de jetons qu'il/elle souhaite vous renvoyer. Le receveur peut donc vous renvoyer un nombre de jetons allant de 0 à la totalité des jetons qu'il/elle a reçus.

Le gain de chaque joueur correspond au nombre de jetons qui lui reste à la fin de ces trois étapes.
Ainsi, en notant $A$ le nombre de jetons que vous avez envoyés à la première étape, et $B$ le nombre de jetons renvoyés par le receveur, les gains sont les suivants :

- Pour vous, le gain est de $10-\mathrm{A}+B$
- Pour l'autre joueur, le gain est de $10+3 \mathrm{~A}-\mathrm{B}$


## Reminder of rules for game 1:

This game plays with two players: you and another player.
You play the sender's role, the other player is the receiver.
You both earn 10 tokens.
The game is played in three phases:

1. You decide of a number of tokens (0 to 10) to send to the receiver.
2. Tokens you send are multiplied by three by the experimenter before being given to the receiver.
3. The receiver decides how many tokens to send back to you. The receiver can send any amount from 0 to all the tokens she received.

Earnings from each player corresponds to the number of tokens at the end of all three steps. Thus, denoting $A$ the number of tokens you sent and $B$ the number of tokens sent back by the receiver, earnings are the following:

- Your earnings are $10-A+B$
- The other player's earnings are $10+3 A-B$

21. Cette question peut être prise en compte pour le calcul de vos gains.

Un groupe de policiers d’lle de France a joué au jeu 1 dans le rôle du receveur. Il leur a été demandé de déterminer combien de jetons ils décident de renvoyer en fonction du nombre de jetons reçus. Nous allons tirer au sort un policier dans ce groupe et utiliser ses réponses pour déterminer vos gains. Vous avez le rôle de l'envoyeur. Vous disposez de 10 jetons.

This question can be taken into account to compute your earnings.

A group of police officers from the Ile-de-France region played game 1 as a receiver. They were asked to decide how many tokens to send back, as a function of the tokens received. We will draw a police officer at random within this group and use their answers to determine your earnings.
You have 10 tokens.

Combien de jetons souhaitez-vous envoyer à l'autre joueur?
How many tokens do you wish to send to the other player?

## Nombre entier <br> Integer

22. Cette question peut être prise en compte pour le calcul de vos gains. Vous avez choisi d'envoyer REPONSE jetons. Vous jouez avec le même policier qu'à la question précédente, qui dispose donc de REPONSE*3 jetons. Nous allons maintenant vous demander de déterminer combien cette personne va vous renvoyer de jetons.
Vos gains seront déterminés comme suit :
Si l'écart entre la valeur que vous choisissez et celle effectivement choisie par le policier avec qui vous jouez est inférieur à 2 jetons, vous récupérerez 5 jetons.

This question can be taken into account to compute your earnings.
You have chosen to send ANSWER tokens. The other player therefore has ANSWER*3 tokens. We are now asking you to determine how many tokens the other player will send back. You are playing with the same police officer as in the previous question.
Your earnings will be determined as follows:
If the difference between your answer and the number of tokens truly sent back by the other player is smaller or equal to 2, you will earn 5 tokens.

## Combien pensez-vous qu'il/elle va vous renvoyer de jetons?

How many tokens do you think the other player will send back?

Nombre entier entre 0
et REPONSE*3
Integer BETWEEN 0
AND 3*ANSWER
23. Cette question peut être prise en compte pour le calcul de vos gains.

Un groupe de lycéens d'Ile de France a joué au jeu 1 dans le rôle du receveur. Il leur a été demandé de déterminer combien de jetons ils décident de renvoyer en fonction du nombre de jetons reçus. Nous allons tirer au sort un lycéen dans ce groupe et utiliser ses réponses pour déterminer vos gains. Vous avez le rôle de l'envoyeur. Vous disposez de 10 jetons.

This question can be taken into account to compute your earnings.
A group of high-school students from the Ile-de-France region played game 1 as a receiver. They were asked to decide how many tokens to send back, as a function of the tokens received. We will draw a student at random within this group and use their answers to determine your earnings.
You have 10 tokens.

Combien de jetons souhaitez-vous envoyer à l'autre joueur?
How many tokens do you wish to send to the other player?

Nombre entier
Integer
24. Cette question peut être prise en compte pour le calcul de vos gains. Vous avez choisi d'envoyer REPONSE jetons. Vous jouez avec le même lycéen qu'à la question précédente, qui dispose donc de REPONSE*3 jetons. Nous allons maintenant vous demander de déterminer combien cette personne va vous renvoyer de jetons.
Vos gains seront déterminés comme suit :
Si l'écart entre la valeur que vous choisissez et celle effectivement choisie par le lycéen avec qui vous jouez est inférieur à 2 jetons, vous récupérerez 5 jetons.

## This question can be taken into account to compute your earnings.

You have chosen to send ANSWER tokens. The other player therefore has ANSWER*3 tokens. We are now asking you to determine how many tokens the other player will send back. You are playing with the same high-school student as in the previous question.
Your earnings will be determined as follows:
If the difference between your answer and the number of tokens truly sent back by the other player is smaller or equal to 2 , you will earn 5 tokens.

Combien pensez-vous qu'il/elle va vous renvoyer de jetons?

How many tokens do you think the other player will send back?

Nombre entier entre 0
et REPONSE*3

Integer BETWEEN 0
AND 3*ANSWER


|  | 1 - Je ne leur fais pas du tout confiance |
| :--- | :--- |
| Sur une échelle de 1 à 7 , à quel point diriez- | $2-$ |
| vous que vous faites confiance aux gens en | $3-$ |
| général? | $4-$ |
|  | $5-$ |
|  | $6-$ |
|  | $7-$ Je leur fais totalement confiance |
| On a scale from 1 to 7 , how much would <br> you say you trust people in general? | 1- I do not trust them at all ... |
|  | $7-$ I trust them completely |

Vous avez terminé la quatrième étape.
Vous allez maintenant commencer la cinquième étape.

You have completed the fourth step.
You will now begin the fifth step.

## Cinquième étape :

Fifth step:

Les réponses aux questions suivantes ne seront pas prises en compte dans le calcul de vos gains. Nous vous demandons néanmoins de répondre le plus sincèrement possible.

Pour les questions qui suivent, veuillez sélectionner la réponse qui se rapproche le plus de votre sentiment vis-à-vis de l'affirmation (pas du tout d'accord, plutôt pas d'accord, plutôt d'accord, tout à fait d'accord).

Answers from the following questions will not be taken into account for the computation of your earnings. Nonetheless, we ask you to answer as sincerely as possible.

For the following questions, please select the answer which is the closest to your own feelings.

| 28. | Imaginons que dans le futur vous soyez la victime d'un vol. Vous êtes certain d'aller le déclarer auprès de la police. Imagine that in the future, you are victim of a theft. You are certain to report it to police officers. | 1- Pas du tout d'accord <br> 2- Plutôt pas d'accord |
| :---: | :---: | :---: |
| 29. | Je pense que les policiers sont des gens violents. I think police officers are violent individuals. | 3- Plutôt d'accord <br> 4- Tout à fait |
| 30. | Je pense que la carrière de policier est en général une carrière honorable. <br> I believe that police officer is a honorable career. | d'accord <br> 1-Strongly |
| 31. | J'envisage, dans le futur, de m'engager dans une carrière de policier. <br> I am considering a career in the police. | disagree <br> 2- Disagree <br> 3- Agree <br> 4- Strongly agree |

Vous avez terminé la cinquième étape.
Vous allez maintenant commencer la sixième étape.
You have completed the fifth step.
You will now begin the sixth step.

## Sixième étape :

Sixth step:

Vous avez maintenant la possibilité de choisir à quelle association faire un don de $2 €$. Ces $2 €$ seront donnés par les organisateurs de cette étude à l'association de votre choix.
Ce n'est donc pas vous qui payez, vous indiquez à qui vous souhaitez que les organisateurs donnent l'argent.
Il vous est demandé ici de faire un choix entre deux associations, qui vont vous être présentées.
You have now the possibility to choose a charity to which to give $2 €$. These $2 €$ will be given by the experimenters to the charity you chose.
You are therefore not paying. You just indicate to which charity the experimenters will give the money. You are asked to make a choice between two organizations, which will be presented.

La première association à laquelle vous pouvez donner est L'Euvre des Orphelins de la Préfecture de Police.


L'Euvre des Orphelins de la Préfecture de Police vient en aide à tous les orphelins des fonctionnaires actifs, administratifs ou techniques décédés relevant de la Préfecture de Police de Paris et dans les trois départements de la petite couronne.

Les actions de la Fondation sont :

- L'attribution de pensions annuelles aux orphelins secourus selon des modalités déterminées par le conseil d'administration,
- La distribution de secours, soit au moment du décès du fonctionnaire, soit en cas de besoins extraordinaires (maladie grave ou décès du conjoint créant une situation familiale particulièrement précaire, apprentissage onéreux, ...),
- L'appui aux orphelins dont l'admission peut être demandée soit par une administration, soit dans un établissement scolaire (pupille de la Ville, orphelinat public ou privé, bourses scolaires ou universitaires...).

The first association to which you can give money is L'Euvre des Orphelins de la Préfecture de Police.
This charity helps all orphans from deceased police officers, administrative or technical staff, within the jurisdiction of the Paris Police Prefecture and all three departments of the Petite Couronne.
The actions of the foundation are the following:

- Provision of annual pensions to orphans helped under the conditions prescribed by the Executive Board,
- Support, either at the time of death of the officer or for extraordinary circumstances (serious illness or death of the spouse creating a particularly precarious situation for children, expensive education...),
- Support for orphans when required by an administration or school (State ward, public or private orphanage, scholarships...)

La seconde association à laquelle vous pouvez donner est Les Apprentis d'Auteuil.


Apprentis d'Auteuil est une fondation catholique, reconnue d'utilité publique depuis 1929, qui accompagne plus de 30000 jeunes et 6000 familles fragilisés. Elle soutient les jeunes en difficulté à travers des programmes d'accueil, d'éducation, de formation et d'insertion en France et à l'international pour leur permettre de devenir des adultes libres et épanouis de demain.

The second charity you may give is Les Apprentis d'Auteuil.
Apprentis d'Auteil is a catholic charity, recognized as serving public interest, which provides support to 30000 youth and 6000 disadvantaged families. It supports troubled youth through education, training and insertion programs in France and abroad, to help them become independent adults.

A laquelle de ces deux associations souhaitez-vous donner $2 €$ ?
32.

1- L'Euvre des Orphelins de la
Préfecture de Police
2- Les Apprentis d'Auteuil

To which of the two charities do you wish to give $2 \epsilon$ ?

| A laquelle de ces deux associations |  |
| :--- | :--- |
| souhaitez-vous donner $2 €$ ? | 1- L'Euvre des Orphelins de la |
| 32. | Préfecture de Police |
| Tive $2 €$ ? |  |

Vous avez terminé la sixième étape.
Vous allez maintenant commencer la septième étape.
You have completed the sixth step.
You will now begin the seventh step.

## Septième étape :

Seventh step:

Les réponses aux questions suivantes ne seront pas prises en compte dans le calcul de vos gains. Nous vous demandons néanmoins de répondre le plus sincèrement possible. Pour rappel, toutes vos réponses seront traitées de manière anonyme, et personne n'aura accès à vos réponses.

Vous êtes...
1- Un homme - Male
2- Une femme - Female
3- Non-binaire - Non-binary
4- Ne souhaite pas répondre - I
do not wish to reply

| 34. | Quelle est votre année de naissance? What is your birth year? | Nombre entier Integer |
| :---: | :---: | :---: |
| 35. | En quelle classe êtes-vous inscrit(e)? <br> What grade are you in? | 1- Seconde professionnelle <br> 2- Première professionnelle <br> 3- Terminale professionnelle <br> 4- Seconde générale et technologique <br> 5- Première technologique <br> 6- Terminale technologique <br> 7- Première générale <br> 8- Terminale générale <br> 9- BTS <br> 10- Autre |
| 36. | Quelle est/était votre catégorie socio-professionnelle de votre père? <br> What is the socio-professional category of your father? | 1- agriculteurs exploitants <br> 2 - artisans, commerçants et chefs d'entreprise <br> 3- cadres et professions intellectuelles supérieures <br> 4- professions intermédiaires (cadres moyens) <br> 5- employés et personnel de service <br> 6- ouvriers qualifiés <br> 7- manœuvres et ouvriers spécialisés <br> 8- autres personnes sans activité professionnelle <br> 9- étudiant <br> 98- Ne souhaite pas répondre <br> 99- Ne sait pas |


| 37. | Quelle est/était votre catégorie socio-professionnelle de votre mère? <br> What is the socio-professional category of your mother? | 1- agriculteurs exploitants <br> 2 - artisans, commerçants et chefs d'entreprise <br> 3- cadres et professions intellectuelles supérieures <br> 4- professions intermédiaires <br> (cadres moyens) <br> 5- employés et personnel de service <br> 6- ouvriers qualifiés <br> 7- manœuvres et ouvriers <br> spécialisés <br> 8- autres personnes sans activité professionnelle <br> 9- étudiante <br> 98- Ne souhaite pas répondre <br> 99- Ne sait pas |
| :---: | :---: | :---: |
| 38. | A propos de l'action en général de la police ou de la gendarmerie nationale dans la société française actuelle, vous diriez généralement qu'elle est... <br> Regarding the action of the police in general in French society, you would say that it is generally... | 1- Très satisfaisante - Very satisfactory <br> 2- Satisfaisante - Satisfactory <br> 3- Peu satisfaisante - Not completely satisfactory <br> 4- Pas du tout satisfaisante - Not at all satisfactory |
| 39. | Vous arrive-t-il personnellement de vous sentir en insécurité dans votre quartier ou votre village ? <br> Do you sometimes feel insecurity in your neighborhood or village? | 1- Souvent - Often <br> 2- De temps en temps - <br> Sometimes <br> 3- Rarement - Rarely <br> 4- Jamais - Never |
| 40. | Au lycée, il est très commun pour les élèves d'avoir une matière préférée. Nous aimerions savoir quelle est la matière préférée dans votre lycée, mais aussi vérifier que vous lisez bien les questions. Pour montrer que vous avez bien lu cette question, veuillez ignorer la question suivante et cliquer sur Enseignement Moral et Civique. <br> Quelle est votre matière préférée au lycée? <br> In high-school, it is very common for students to have a favorite subject. We would like to know what is your favorite subject, but also if you carefully read questions. To show that you carefully read this question, please ignore the following question and select Enseignement Moral et Civique. <br> What is your favorite subject in school? | 1 - Français/Philosophie <br> 2 - Histoire Géographie <br> 3 - Langues Vivantes <br> 4 - Sciences économiques et Sociales <br> 5 - Mathématiques <br> 6 - Physique-Chimie <br> 7 - Sciences de la Vie et de la Terre <br> 8 - Education Physique et Sportive <br> 9 - Enseignement Moral et Civique <br> 10 - Sciences Numériques et Technologie |

Depuis 2018, avez-vous été personnellement victime d'un vol ou d'une tentative de vol avec violences physiques
41. ou menaces?
41. ou menaces?
Since 2018, have you been victim of a theft or attempted theft, with violence or threats? SI REPONSE PRECEDENTE = 1
Vous-même ou quelqu'un de votre famille s'est-il rendu
dans un commissariat de police ou à la gendarmerie pour
Vous-même ou quelqu'un de votre famille s'est-il rendu
dans un commissariat de police ou à la gendarmerie pour
42. déclarer cet événement ?

1- Oui - Yes
0 - Non - No

1- Oui- Yes
0 - Non - No
IF PREVIOUS ANSWER $=1$
Did you or someone from your family report this event to the police?
Depuis 2018, avez-vous été personnellement victime d'un
vol ou d'une tentative de vol sans violences physiques
43. ni menaces ?

Since 2018, have you been victim of a theft or attempted theft, without violence or threats?

## SI REPONSE PRECEDENTE = 1

Vous-même ou quelqu'un de votre famille s'est-il rendu dans un commissariat de police ou à la gendarmerie pour
44. déclarer cet événement ?

IF PREVIOUS ANSWER $=1$
Did you or someone from your family report this event to the police?
Depuis 2018, avez-vous été personnellement victime de
violences physiques de la part d'une personne qui ne
vit pas dans votre foyer, à l'exception de violences à
45. caractère sexuel ?

Since 2018, have you been victim of physical violence
from someone outside your household, excepted sexual violence?
SI REPONSE PRECEDENTE = 1
Vous-même ou quelqu'un de votre famille s'est-il rendu dans un commissariat de police ou à la gendarmerie pour
déclarer cet événement? 1-Oui - Yes
IF PREVIOUS ANSWER $=1$
Did you or someone from your family report this event to the police?
Depuis 2018, avez-vous été personnellement victime de
47. violences à caractère sexuel de la part d'une personne qui

1- Oui - Yes
ne vit pas dans votre foyer?

1- Oui - Yes
0 - Non - No

1- Oui - Yes
0 - Non - No
1- Oui- Yes
0 - Non - No

Since 2018, have you been victim of sexual violence from
someone outside your household?
SI REPONSE PRECEDENTE = 1
Vous-même ou quelqu'un de votre famille s'est-il rendu dans un commissariat de police ou à la gendarmerie pour déclarer cet événement? 1-Oui - Yes
48.

IF PREVIOUS ANSWER = 1
Did you or someone from your family report this event to the police?
Depuis 2018, en dehors de tout vol ou violences, avezvous été personnellement victime de menaces de la part
49. d'une personne ne vivant pas dans votre foyer?

Since 2018, have you been victim of threats from someone outside your household?
SI REPONSE PRECEDENTE = 1
Vous-même ou quelqu'un de votre famille s'est-il rendu dans un commissariat de police ou à la gendarmerie pour
50. déclarer cet événement?

1- Oui- Yes
0- Non - No
IF PREVIOUS ANSWER = 1
Did you or someone from your family report this event to the police?
Depuis 2018, en dehors de tout vol, violences ou menaces abordées précédemment, avez-vous été personnellement
51. victime d'injures ou insultes de la part d'une personne ne 1- Oui - Yes
vivant pas dans votre foyer?
0- Non - No
Since 2018, have you been victim of insults from someone outside your household?
SI REPONSE PRECEDENTE = 1
Vous-même ou quelqu'un de votre famille s'est-il rendu dans un commissariat de police ou à la gendarmerie pour
52. déclarer cet événement?

> 1- Oui - Yes
> 0- Non - No

IF PREVIOUS ANSWER $=1$
Did you or someone from your family report this event to the police?
Depuis 2018, avez-vous personnellement été victime
53. d'arnaque ou tentative d'arnaque ?

1- Oui - Yes
Since 2018, have you been victim of a scam or attempted
0 - Non - No
scam?
SI REPONSE PRECEDENTE = 1

| 54. Vous-même ou quelqu'un de votre famille s'est-il rendu | 1- Oui - Yes |
| :--- | :--- | :--- |
| dans un commissariat de police ou à la gendarmerie pour | 0-Non - No |
| déclarer cet événement? |  |

IF PREVIOUS ANSWER $=1$
Did you or someone from your family report this event to the police?
Depuis 2018, avez-vous été victime de violences, menaces, injures, traitements défavorables (refus d'un emploi, d'un logement) ou d'attitudes ou propos blessants, en raison de votre couleur de peau, de vos origines, de votre religion, de votre orientation ou identité sexuelle,
55. de votre sexe ou de tout autre critère?

1- Oui - Yes
0 - Non - No
Since 2018, have you been victim of violence, threats, insults or unfair treatment (refusal of employment or housing...) or other hurting behavior, because of your skin color, origin, religion, gender identity or sexual orientation, gender or any other criterion?

1- Votre couleur de peau - Skin color
SI REPONSE PRECEDENTE $=1$
En particulier, diriez-vous que la ou l'une des raisons pour laquelle vous avez été victime de ce/ces événement(s) est? (Plusieurs réponses possibles)
56.

IF PREVIOUS ANSWER $=1$
In particular, for what reason do you think you were victim of this(these) event(s)? (Several options possible)

2- Vos origines - Origin
3- Votre religion - Religion
4- Votre orientation ou identité
sexuelle - Sexual orientation or gender identity
5- Au fait que vous soyez un
homme/une femme - Gender
6- Autres - Other
9- Ne sait pas - Do not know

## SI REPONSE PRECEDENTE = 1

Vous-même ou quelqu'un de votre famille s'est-il rendu dans un commissariat de police ou à la gendarmerie pour 57. déclarer cet événement?

1- Oui - Yes
0- Non - No
IF PREVIOUS ANSWER $=1$
Did you or someone from your family report this event to the police?

1- Suffisante - Sufficient
2- Excessive - Excessive
De l'action de la police ou de la gendarmerie en matière de lutte contre la délinquance dans votre quartier, vous diriez qu'elle est...
58.

About the action of the police in your neighborhood, you would say it is...

3- Insuffisante - Inexistent
4- Inexistante alors qu'elle serait nécessaire - Inexistent but
necessary
5- Inexistante mais qu'elle n'est pas nécessaire - Inexistent but not necessary

[^9]Since 2018, how many times you would say you have been Integer subject to an identity check by police?

| 60. | Vous êtes-vous déjà senti personnellement discriminé(e) par la police? <br> Have you ever felt discriminated by police officers? | $\begin{aligned} & \text { 1- Oui - Yes } \\ & \text { 0- Non - No } \end{aligned}$ |
| :---: | :---: | :---: |
| 61. | Avez-vous déjà personnellement subi des violences physiques de la part de la police ? <br> Have you ever been the subject of physical violence by police officers? | $\begin{aligned} & \text { 1- Oui - Yes } \\ & \text { 0- Non - No } \end{aligned}$ |
| 62. | Avez-vous déjà personnellement subi des menaces de la part de la police? <br> Have you ever suffered threats by police officers? | $\begin{aligned} & \text { 1- Oui - Yes } \\ & \text { 0- Non - No } \end{aligned}$ |

Vous avez terminé la septième étape, ce qui conclut votre participation.
You have completed the seventh step, which concludes your participation.

Le questionnaire est terminé.
Merci pour votre participation.
Veillez remettre la tablette à un responsable.
The questionnaire is now complete.
Thank you for your participation!
Please return the tablet to an experimenter.


[^0]:    *I am grateful to Guillaume Hollard for his help in setting up the experiment and for his invaluable advice. I also greatly thank Inès Picard for her excellent research assistantship, as well as Wael Bousselmi, Clémence Allard, Sarah Komiha, Damien Bradelle, Jean-Eudes Rascoussier and Alhussein Jamil for their help in running the sessions. I also want to thank the teachers and administrations of the two high-schools for their help in organizing the experiment. I am grateful to Lori Beaman, Marie-Claire Villeval, Pedro Bordalo, Pierre Boyer, Pauline Rossi, Francis Kramarz, Isabelle Méjean, Benoit Schmutz, Nikhil Agrawal, Alexis Belianin, Sophie Hatte, Modibo Sidibé, Radu Vranceanu, as well as participants of the ESA 2021 Global Online Conference, RExCon 2021 conference and ASFEE 2021 conference, as well as internal seminars for their comments and remarks. I gratefully acknowledge the Investissements d'Avenir (ANR-11-IDEX-0003/Labex Ecodec/ANR-11-LABX-0047) for financial support.

[^1]:    ${ }^{1}$ e.g. the New York Police Department's "Neighborhood Policing Initiative", the London Police's "Community Policing", the "Police de Proximite" in France.
    ${ }^{2}$ https://www.socialscienceregistry.org/trials/7116

[^2]:    ${ }^{3}$ The economic literature on the police force in general is not scarce, see for instance Ba et al. (2021); Ang (2021) or Fryer Jr (2019).
    ${ }^{4}$ For instance, $\operatorname{Katz}$ (2014) highlights a deteriorated trust in the police for African-Americans following the deaths of Michael Brown and Eric Garner.

[^3]:    ${ }^{5}$ Under French law, it is illegal to ask individuals about their ethnicity or race. The only distinction allowed in France regards the nationality and place of birth. The figures presented here represent the share of immigrants, which are defined as individuals born outside of France, whose nationality of birth is not French and who currently resides in France.

[^4]:    ${ }^{6}$ i.e. a shorter response time for the participant to associate the police with positive words than negative words.

[^5]:    ${ }^{7}$ The question was: "In high-school, it is very common for students to have a preferred subject. We would like to know what is your favorite subject, but also check that you read questions carefully. To show that you have read this question well, please disregard the following question and select Civics education. What is your favorite subject of study?"
    ${ }^{8}$ The only question legally allowed to be asked relates to the nationality of parents. However, administrations of

[^6]:    the high-schools did not allow the collection of these sensitive data, as most students were minor and they feared the questions could make some students nervous.
    ${ }^{9}$ https://www.education.gouv.fr/covid-19-les-mesures-en-vigueur-dans-les-ecoles-colleges-et-lycees-partir-du-5-avril-2021-322868

[^7]:    ${ }^{10}$ I therefore consider that all signals have the same weight, and no other factors - such as similarity (Bordalo et al. 2021) - enter into the beliefs.

[^8]:    ${ }^{11}$ Identity checks are widely used by the French police force to deter criminality. They have been the source of a large political and societal debate, both about their effectiveness (Tiratelli et al. 2018) and about the treatment of minority citizens (Beauchemin et al. 2016, Roché, 2016.

[^9]:    59. Depuis 2018, combien de fois diriez-vous que vous avez

    Nombre entier
    subi un contrôle de police ?

