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Civic honesty around the globe

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Civic honesty is essential to social capital and economic development, but is often in conflict with material self-interest. We examine the trade-off between honesty and self-interest using field experiments in 355 cities spanning 40 countries around the globe. We turned in over 17,000 lost wallets with varying amounts of money at public and private institutions, and measured whether recipients contacted the owner to return the wallets. In virtually all countries citizens were more likely to return wallets that contained more money. Both non-experts and professional economists were unable to predict this result. Additional data suggest our main findings can be explained by a combination of altruistic concerns and an aversion to viewing oneself as a thief, which increase with the material benefits of dishonesty.

Honest behavior is a central feature of economic and social life (*1*, *2*). Without honesty, promises are broken, contracts go unenforced, taxes remain unpaid, and governments become corrupt. Such breaches of honesty are costly to individuals, organizations and entire societies. For example, losses due to tax evasion in the US are estimated in the hundreds of billions of dollars each year (*3*), and the global cost of corruption and other illicit financial flows has been estimated at 1.3 trillion dollars annually—an amount roughly equal in size to the gross domestic product of Australia (*4*, *5*).

In this paper we examine how acts of civic honesty, where people voluntarily refrain from opportunistic behavior, are affected by monetary incentives to act otherwise. Although there is robust experimental literature on the conditions that give rise to honest behavior (*6*–*11*), little is known about how material incentives impact civic honesty, particularly in field settings. Understanding the relationship between civic honesty and material incentives is not only practically relevant, but also theoretically important.

Theories of honesty make different predictions about the role of material incentives. Classic economic models based on rational self-interest suggest that, all else equal, honest behavior will become less common as the material incentives for dishonesty increase (*12*). Models of human behavior that incorporate altruistic or other-regarding preferences also predict dishonesty to rise with increasing incentives, as self-interest virtually always dominates concerns for the welfare of others—we care about others but not as much as we care about ourselves (*13*–*15*). As a result, self-interest will play an increasingly prominent role in behavior as the material incentives for dishonesty grow. Psychological models based on self-image maintenance predict that people will cheat for profit so long as their behavior does not require them to negatively update their self-concept (*7*, *16*). However, it is unclear ex ante whether self-image concerns will become more or less important as the incentives for dishonesty increase, and what form that relationship will take. A further complication is that most of the experimental literature on honest behavior involves modest financial stakes, has been conducted in laboratory settings (where people understand their behavior is being observed), and tends to rely on populations from Western, educated, industrialized, rich and democratic societies (*17*).

We conducted a series of large-scale field experiments across the globe to examine how financial incentives influence rates of civic honesty. We turned in "lost" wallets and experimentally varied the amount of money left in the wallets, allowing us to determine how monetary stakes affect return rates across a broad sample of societies and institutions. Our experiments take inspiration from classic "lost letter" studies that examine behavior in naturalistic settings but also provide tighter experimental control than past studies (*18*, *19*).

We visited 355 cities in 40 countries and turned in a total of 17,303 wallets. We typically targeted the five to eight largest cities in a country, with roughly 400 observations per country. Wallets were returned to one of five societal institutions: (i) banks, (ii) theaters, museums, or other cultural establishments, (iii) post offices, (iv) hotels, and (v) police stations, courts of law, or other public offices. These institutions serve as useful benchmarks because they are common across countries and typically have a public reception area where we could perform the drop-offs.

Our wallets were transparent business card cases, which we used to ensure that recipients could visually inspect without having to physically open the wallet (fig. S1). Our key independent variable was whether the wallet contained money, which we randomly varied to hold either no money or US $13.45 ("NoMoney" and "Money" conditions, respectively). We used local currencies, and to ensure comparability across

countries, we adjusted the amount according to each country's purchasing power. Each wallet also contained three identical business cards, a grocery list, and a key. The business cards displayed the owner's name and email address, and we used fictitious but commonplace male names for each country. Both the grocery list and business cards were written in the country's local language to signal that the owner was a local resident.

After walking into the building, one of our research assistants (from a pool of eleven male and two female assistants) approached an employee at the counter and said, "Hi, I found this [pointing to the wallet] on the street around the corner." The wallet was then placed on the counter and pushed over to the employee. "Somebody must have lost it. I'm in a hurry and have to go. Can you please take care of it?" The research assistant then left the building without leaving contact details or asking for a receipt. Our key outcome measure was whether recipients contacted the owner to return the wallet. We created unique email addresses for every wallet and recorded emails that were sent within 100 days of the initial drop-off. Complete methods and results, including additional robustness checks such as testing for experimenter effects, can be found in the supplementary materials.

As shown in the left half of Fig. 1, our cross-country experiments return a remarkably consistent result: citizens were overwhelmingly more likely to report lost wallets with money than without. We observed this pattern for 38 out of our 40 countries, and in no country did we find a statistically significant decrease in reporting rates when the wallet contained money. On average, adding money to the wallet increased the likelihood of reporting a wallet from 40% in the NoMoney condition to 51% in the Money condition ($P < 0.0001$). This result holds when controlling for a number of recipient and situational characteristics (table S8). Furthermore, while rates of civic honesty vary substantially from country to country, the absolute increase in honesty across conditions was stable. As shown on the right half of Fig. 1, the average treatment effect is roughly equal in size across quartiles based on absolute response rates.

Citizens displayed greater civic honesty when the wallets contained money, but perhaps this is because the amount was not large enough to be financially meaningful. To examine this possibility we also ran a "BigMoney" condition in three countries (US, UK, and Poland) that increased the money inside the wallet to US $94.15, or seven times the amount in our original Money condition. Shown in Fig. 2, reporting rates in all three countries increase even further when the wallets contained a sizable amount of money. Pooled across the three countries, response rates increased from 46% in the NoMoney condition to 61% in the Money condition, and topped out at 72% in the BigMoney condition ($P < 0.0001$ for all pairwise comparisons; table S9).

We next turn to the question of why people are especially likely to return a lost wallet when it contains more, rather than less, money. Our study design allows us to rule out several possible explanations. We first explored the possibility that recipients were worried about legal penalties for failing to return a wallet, especially when the wallet contained increasing amounts of money. To address this issue, we examined whether relative reporting rates were affected by (a) the presence of other individuals when receiving the wallet, (b) the presence of security cameras in the building, and (c) state-level variation in lost property laws within the United States. Civic honesty should increase as a function of these variables if recipients were concerned about possible punishment or probability of detection, yet we find that none of these factors explain meaningful variation in reporting rates across treatment conditions (tables S14 to S16). A second explanation is that since we only measured whether recipients reported a lost wallet, recipients in the money conditions may have been more likely to return the wallets while pocketing the cash. We conducted an audit on a subset of wallets reported to us and do not find support for this explanation: over 98% of the money in the wallets we collected was returned. A third possible explanation is that recipients expected a larger "finder's fee" upon returning wallets with greater amounts of money. Using national representative surveys conducted in the US, UK, and Poland, we asked respondents the size of the reward they would expect upon returning a wallet with the amounts of money we used in our studies. We fail to find evidence that people expect a larger reward for returning a wallet with more, rather than less, money (table S17).

Having ruled out three possible explanations, we next formulate and test a simple behavioral model that captures the pattern of results observed in the data (full model details can be found in the supplementary materials). In our framework, civic honesty is determined by the interplay between four components: (i) the economic payoff of keeping the wallet, (ii) the fixed effort cost of contacting the wallet's owner, (iii) an altruistic concern for the owner's welfare, and (iv) the costs associated with negatively updating one's self-image as a thief (what we will call "theft aversion").

A key feature of our framework is that altruistic concerns are affected by the contents of the wallet thought to be valuable to the owner, whereas concerns of theft aversion are only affected by the contents of the wallet that are also valuable to the recipient (e.g., money). To distinguish between these two motivations, we conducted a "Money-NoKey" condition in our US, UK, and Poland locations with wallets identical to our Money condition but which did not contain a key. Unlike money, the key is valuable to the owner but not to the recipient, and so any difference between the Money and Money-NoKey conditions can be ascribed to altruistic concerns. Shown in table S10, recipients were on average 9.2 percentage

points more likely to report a wallet with a key than without (P = 0.0001 when results are pooled across countries). This suggests that recipients reported a lost wallet partly because recipients are concerned about the harm they impose on the owner.

The second part of our framework—and crucial to explaining the increase in reporting rates for wallets with greater amounts of money—involves the aversion to viewing oneself as a thief. Using nationally representative surveys conducted in the US, UK, and Poland, we asked respondents to imagine receiving a wallet with the contents in our four conditions (NoMoney, Money, BigMoney, and Money-NoKey) and rated the extent to which failing to return the wallet would feel like stealing on a scale from 0 (*not at all*) to 10 (*very much*). Respondents reported that failing to return a wallet would feel more like stealing when the wallet contained a modest amount of money than when it contained no money, and that such behavior would feel even more like stealing when the wallet contained a substantial amount of money ($P \leq 0.007$ for all pairwise comparisons; table S11). This tells us that, consistent with our behavioral data on wallet reporting rates, the self-image cost of failing to return the wallet likely increases with the amount of money in the wallet. By contrast, we fail to observe a reliable difference in "feels like stealing" scores when comparing wallets that contained the same amount of money but differed in whether they also contained a key (Money vs. Money-NoKey; P = 0.259). This tells us that concerns of theft aversion are likely tied to contents valuable to the recipient, such as the amount of money inside the wallet, but not to other contents that are only valuable to the owner. Although survey responses do not always generalize to real behavior and should be interpreted carefully, these findings are consistent with the hypothesis that larger monetary payoffs for dishonesty are also associated with increased psychological costs, and that the increase in psychological costs can outweigh the marginal economic benefits of dishonesty.

In a final set of studies, we investigated whether people anticipate this form of civic honesty. We asked a sample of 299 participants to predict reporting rates in the US for wallets that contained \$0, \$13.45, and \$94.15 (corresponding to our NoMoney, Money, and BigMoney conditions). To encourage accuracy, we notified respondents that the most accurate predictors would receive a cash bonus. Shown in Fig. 3B, we find that respondents' beliefs were at odds with the behavioral data (Fig. 3A). Respondents predicted that rates of civic honesty would be highest when the wallet contained no money (M = 73%, SD = 29), lower when the wallet contained a modest amount of money (M = 65%, SD = 24), and lower still when the wallet contained a substantial amount of money (M = 55%, SD = 29). The average predicted change in reporting rates from condition to condition was significantly different from the actual change in reporting rates ($P < 0.001$ for all pairwise comparisons). As wallet amounts increased, 64% of respondents incorrectly predicted reporting rates would decrease and 18% correctly predicted reporting rates would increase ($P < 0.001$ by a sign test). Additional questioning suggests that respondents' predictions reflected a mental model of human behavior that exaggerates the role of narrow self-interest (*20*, *21*). When wallets contained more money, respondents expected self-interest to grow and altruistic concerns for the owner to fade, and gave little weight to theft aversion in influencing reporting rates (see table S13).

The general public incorrectly predicts how citizens will respond as the monetary value of the wallet increases, but perhaps professional economists will be more accurate. We asked a sample of 279 top-performing academic economists to predict our results. Like our non-experts, this sample also did not expect reporting rates to increase for wallets with greater amounts of money. Shown in Fig. 3C, respondents on average predicted that rates of civic honesty would be higher in the NoMoney and Money conditions (M = 69%, SD = 25 and M = 69%, SD = 21, respectively) than in the BigMoney condition (M = 66%, SD = 23). These predictions were again significantly different from the actual changes we observe across conditions ($P < 0.001$ for all pairwise comparisons). However, the degree of miscalibration among economists was less severe than in our non-expert sample. As wallet amounts increased, 49% of economists incorrectly predicted reporting rates would decrease and 29% correctly predicted reporting rates would increase ($P < 0.001$ by a sign test).

We conducted field experiments in 40 countries to examine whether people act more dishonestly when they have a greater economic incentive to do so, and found the opposite to be true. Citizens were more likely to return wallets that contained relatively larger amounts of money. This finding is robust across countries and institutions, and holds even when economic incentives for dishonesty are substantial. Our results are consistent with theoretical models that incorporate altruism and self-image concerns, but also suggest modification in that non-pecuniary motivations directly interact with the material benefits gained from dishonest behavior. When people stand to heavily profit from engaging in dishonest behavior, the desire to cheat increases but so do the psychological costs of viewing oneself as a thief—and sometimes the latter will dominate the former.

Our findings also represent a unique data set for examining cross-country differences in civic honesty. Honesty is a key component of social capital (*22*), and here we provide an objective measure to supplement the large body of work that has traditionally examined social capital using subjective survey measures (*2*, *23*–*25*). Using average response rates across countries, we find substantial variation in rates of civic honesty, ranging from 14% to 76%. This variation largely persists

even when controlling for a country's gross domestic product, suggesting that other factors besides country wealth are also at play. In the supplementary materials, we provide an analysis suggesting that economically favorable geographic conditions, inclusive political institutions, national education, and cultural values that emphasize moral norms extending beyond one's in-group are also positively associated with rates of civic honesty. Future research is needed to identify how these and other factors may contribute to societal differences in honest behavior.

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SUPPLEMENTARY MATERIALS

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Materials and Methods
Supplementary Text
Figs. S1 to S15
Tables S1 to S20
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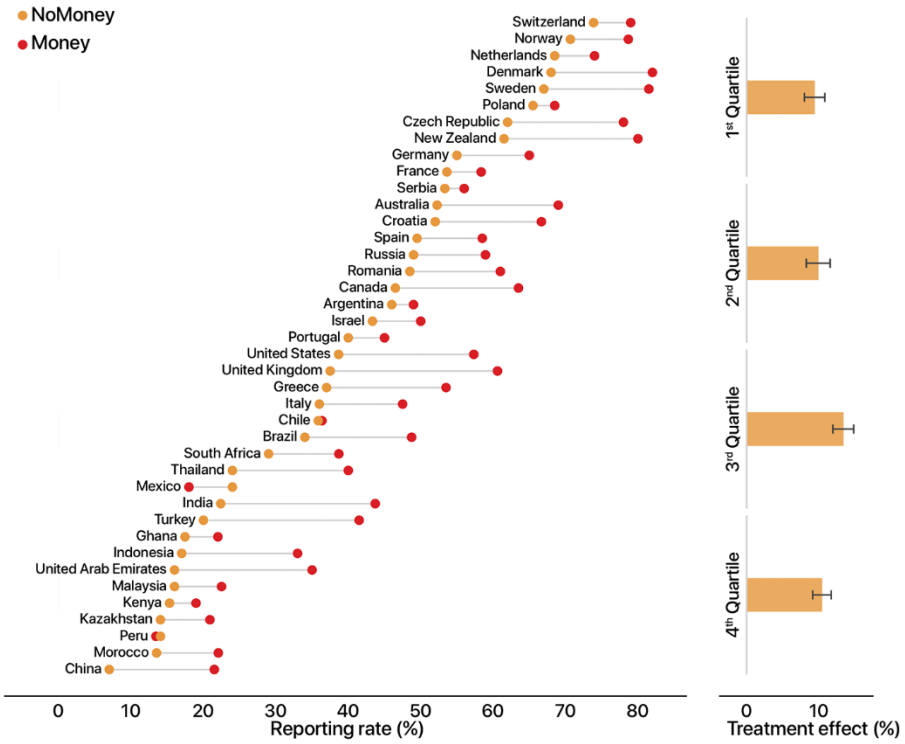

Fig. 1. Share of wallets reported in the NoMoney and Money condition by country. Left hand side: Share of wallets reported in treatments NoMoney (US $0) and Money (US $13.45) by country. The amount of money in the wallet is adjusted according to each country's purchasing power. Right hand side: Average difference between treatment Money and NoMoney across quartiles based on absolute response rates in the NoMoney condition. Error bars represent standard errors of the mean.

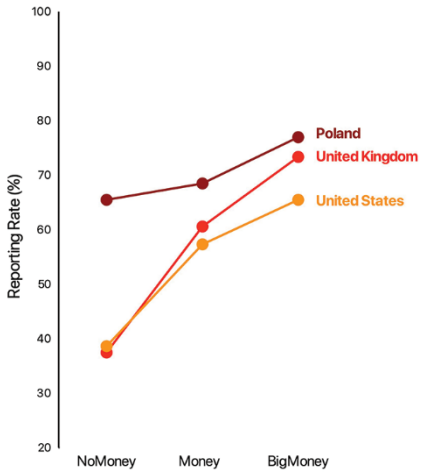

Fig. 2. Reporting rates as a function of monetary stakes. Share of wallets reported in the No-Money (US $0) Money (US $13.45), and Big-Money (US $94.15) conditions.

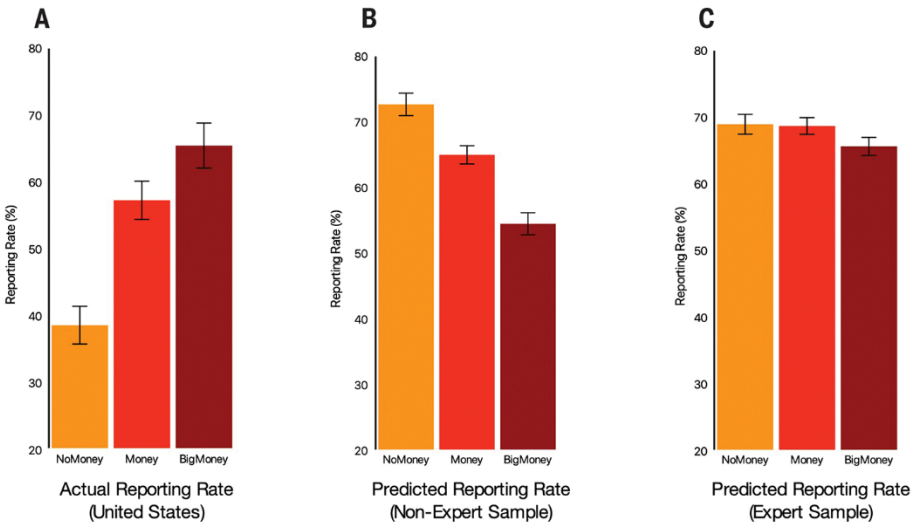

Fig. 3. Actual versus predicted reporting rates. (**A**) Actual reporting rates in the US for each condition (*N* = 800). Error bars represent robust standard errors. (**B**) Average predicted reporting rates for the US by our non-expert sample (*N* = 299). Error bars represent robust standard errors clustered by participants. (**C**) Average predicted reporting rates for the US by our expert sample of academic economists (*N* = 279). Error bars represent robust standard errors clustered by participants.

Science

Civic honesty around the globe

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