SMALL TALK AS A CONTRACTING DEVICE: TRUST, COOPERATIVE NORMS, AND CHANGING EQUILIBRIA [DRAFT]

11/4/2022

Matthew Cashman, Boris Maciejovsky, and Birger Wernerfelt[1]

Abstract

We show experimentally that even very brief small talk with a potential trading partner may function as contracting device by enhancing trust and strengthening cooperative norms. Our subjects engage in a video call prior to playing a game in which one player has to trust that the other will not hold them up. The call has large effects on trust and efficiency in spite of the fact that it takes place before the subjects know anything about the game. In contrast to formal contracts, pre-trade small talk can cover contingencies that are truly unforeseen, and unlike relational contracts, it does not depend on repeated play. It complements, and may even substitute for, incomplete contracts. We also show that between-stage small talk in repeated games can help players move from less to more efficient equilibria.

I. Introduction

In the typical exchange situation, the parties have no incentives to send or receive messages about payoff-irrelevant issues since they do not affect the outcome. And yet, most of us routinely engage in "small talk" with other market participants, often with the expressed aim of "getting to know" them. Three prominent examples are the insistence on meeting (e. g. having a beer with) others before entering into complex trades with them, the belief that it is important to network with people with whom you might do business in the future, and the widespread use of corporate team-building exercises. These and many other examples raise the question of whether pre-trade small talk makes any difference?

To start thinking about the function of small talk, it is helpful to review some stylized facts about when it is and is not demanded. First, it is not deemed necessary in settings such as

[1]cashman@mit.edu, borism@ucr.edu, bwerner@mit.edu. We are indebted to Aaron Nichols and Andrew Cunningham for research assistance. Birger Wernerfelt is grateful to Guillaume Frechette for a very stimulating discussion.

grocery stores, online retailing, or stock markets where simple formal contracts cover all relevant contingencies. Second, other informal contracts, such as handshakes or verbal promises, are used when the agreement involves a small number of well-understood ways to defect. Examples include "I will do the job to a reasonable standard, and you will then pay me $X", "Once this foal is weaned, I will sell it to you for $Y", and "If you agree to bring me the money tomorrow, I will not sell the car to anyone else in the meantime". Third, small talk is used when there is not a complete list of potential conflicts you can talk about ex ante such that a complete contract is unattainable. One class of examples are cases in which you select a partner for a complex trade or service (preferred supplier, kitchen renovator, exclusive retailer,..). In such situations it is very likely that conflicts will present themselves but neither party knows what they all may be. So the best one can do is to try to establish norms of cooperation and hope to enhance trust. The belief is that small talk accomplishes just that. The popular management literature is full of assertions to that effect. For example, the Wikijob Team (2021) claims that "Small talk […] helps to form social cohesion that […] builds trust", and Jeevan Sivasubramanian (2021) writes that "Small talk helps to establish trust".[2]

We report on two experiments that throw light on some effects of small talk. The first set of experiments are based on a very simple game: One player, the "investor", decides whether to invest and if they do, another player, the "operator", chooses between hold up and cooperation. So the operator's choice reflects the power of cooperative norms, while the investor's decision is an indicator of their trust that the operator will adhere to these norms. Our main hypothesis is that investor-operator pairs are more likely to reach the efficient outcome if they have a chance to engage in small talk before the game. We represent small talk by letting two opposing players spend three minutes together (on a video call), knowing only that they are about to play some sort of a game for money (such that they cannot make promises or agreements about any specific moves). The results of these pairs are then contrasted with those obtained by a control group in

[2] It should be acknowledged that we appear to be more willing to break these informal contracts, violate these norms, and doubt this trust when the economic gains from doing so are greater. If a formal contract is possible, it is more likely to be used when more is at stake, for example if you are buying real estate. However, small talk is typically cheaper and results in an "agreement" that is less incomplete than formal contracts. It arguably shares these advantages with relational contracting but does not depend on repeated play. (Gibbons, Greider, Herz, and Zehnder, 2021, look at incomplete relational contracts).

which the players never meet, and we find that the three minutes of small talk increases the fraction of games that achieve the efficient outcome by more than fifty percent

When we unpack the result, we find that small talk has a very strong effect on the investors' willingness to trust their operators, while the latter only reveal themselves to be following cooperative norms to a slightly higher degree.[3] We can eliminate two possible explanations. First, we show, perhaps not surprisingly, that investors are more likely to trust their operators when they have high scores on the six-item questionnaire measuring the extent to which subjects think that others in general can be trusted. It does appear that investors have a slightly higher general trust scores after small talk, but consistent with the questionnaire measuring trust of all others rather than anyone in particular, that difference is very small and not significant. Second, it is not true that small talk enables investors to identify operators who are more likely to cooperate. (The effect is directionally as expected but is small and insignificant.) A third possibility is that small talk increases trust but does not activate cooperative norms and thus eliminates hold up. (In the game they play, operators have no need to trust the investors.) This would suggest that it is more effective when the participants engage in several transactions with possibly different allocations of power. While we cannot explain why small talk does not make the operators much more trustworthy, the experiment is consistent with the idea that small talk develops trust. This offers a rationale for the apparent desire of some market participants to "get to know" each other prior to trade.

In the second experiment we look at a symmetric game and consider an existing relationship that is mired in a "bad" equilibrium. We look at a twice-repeated stag hunt game and show that pairs who are allowed to interact between rounds are more likely to change to the more efficient equilibrium. (The players do not know that they are to play the same game again after the small talk is over and are thus very unlikely to spend the time making promises about it.) In fact, the fraction of pairs that play the efficient equilibrium in the second round is 150% larger after small talk. This suggests that cooperative norms play a larger role after small talk and shows how it may be used to move a game from one equilibrium to another. The latter fact may explain the widespread use of "team-building exercises" in which groups of employees from the same company get to spend some out-of-work time together.

[3] There is some reason to believe that the lack of significance is a type 2 error. Both our initial pilot studies and ex post replications showed larger effects.

Seen in a broader perspective, small talk causes the players to embed the games in a broader social context and the equilibria played there.[4] The existence of these norms and the fact that they affect play in unrelated games can presumably be traced very far back and one could conjecture that they at some point were supported by community enforcement (Coleman, 1955; Kandori, 1992).[5]

We discuss related literature in Section II, derive our hypotheses in Section III, and present the experiments and the results in Section IV. Section V concludes with a brief discussion.

II. Related Literature

Our first experiment is motivated by the "guiding principles" described by Frydlinger and Hart (2019). They describe a range of situations in which parties to a trading relationship meet ex ante and explicitly agree (promise) to behave cooperatively whenever foreseen and unforeseen circumstances afford one of them the ability to hold up the other. They get to know each other and make explicit face-to-face promises, thus "contracting", activating norms, and building mutual trust. The authors report that the practice has been adopted by several businesses and that it seems to "work". The process described by them can be interpreted as taking advantage of the mechanisms studied here. However, a key difference is that the subjects in our first experiment do not talk about the games: they spend just three minutes together without knowing which game they are about to play (so there can be no promises), and the game is "one-shot" (so there can be no fear of retaliation or reputation effects). However, it certainly suggests that small talk is a component of the Frydlinger-Hart process.

The observation that subjects are nicer to those they know better has been explored in several studies in behavioral economics. In particular, Bohnet and Frey (1999) show that players are more generous in dictator games when they have a chance to see their opponents prior to playing. Brooks, Dai, and Sweitzer (2013) show that subjects are more trusting of opponents who start an interaction by making an irrelevant apology for the weather.

---

[4] Roth (1995, p. 295) summarizes this by saying that "Face-to-face interactions call into play all the social training we are endowed with". This idea also plays a big role in the literature on fairness ((Kahneman, Knetch, and Thaler, 1986; Fehr and Schmidt, 1999). For a summary and further references, see Camerer and Thaler (1995).

[5] This would be consistent with the widespread practice in which strangers, when they first meet, try to find a social connection ("So you are a doctor from Cleveland. Do you know Lisa Smith?").

There are large literatures in social psychology and economics on the effects of pre-game communication. The former goes back to at least Deutsch (1958) and some more recent summaries and contributions include Bouas and Komorita (1996), Bicchieri and Lev-on (2007), and Baillet (2010). As far as we know, all experiments described in the social psychology literature involve situations in which subjects are informed about the game prior to communicating. The same is true for the corresponding economics literature, whether it is focused on cheap talk or guilt aversion. So these studies do not throw light on the incomplete contracting angle pursued in the present paper. Ours is, we believe, the first to report on experiments in which subjects communicate face-to-face with no knowledge of the games they are to play afterwards.

The idea that people have a tendency to favor other members of groups to which they belong, has a long history in the literature on tribalism.[6] Also this effect has been studied in a large number of experiments (Goette, Huffman, and Meier, 2006) and field studies (Ert, Fleischer, and Magen, 2016; Karlsson, Kemperman, and Dolnicar, 2017; Edelman, Luca, and Svirsky, 2017), some of which suggest that group membership can change within relatively short periods (Efferson, Lalive, and Fehr, 2008; Rand, Pheffer, Dreber, Sheketoff, Wernerfelt, and Benkler, 2009). On the theoretical side, there is a debate about whether the favorable treatment of in-groups is due to kin selection (an idea going back to Darwin) or the more recent concept of group selection (Nowak, Tarnita, and Wilson, 2010; Wilson, 2012). Since our hypothesis involves players imputing new group membership to people they just got to know, it is clearly inconsistent with a strict interpretation of kin selection.

While our subjects cannot make explicit promises, cooperative norms suggest that they should feel guilty about betraying others' trust in them. Another way to betray trust is to lie and numerous studies in behavioral economics (Frank, 1987; Gneezy, 2005; Mazar, Amir, and Ariely, 2008; Lundquist, Ellingsen, Grippe, and Johannesson, 2009; Belot, Bhasar, and van de Ven, 2010) have documented peoples' aversion to lying and have typically explained it by guilt.[7] The increased trust exhibited by the investors could be explained by them anticipating that operators would feel guilty about violating cooperative norms by betraying trust. (Even if

[6] A representative early statement is due to Taylor and Doria (1981).
[7] This has been taken up in recent theoretical research assuming that lying imposes a private cost on senders (Kartik, 2009; Gneezy, Kajackeite, and Sobel, 2018).

investors have no material reason for the trust and no precise promises were made.[8]) However, this explanation also suggests that the operators should behave more cooperatively.

Not surprisingly, it is very hard to find any economic literature on changing equilibria – such an observation almost runs counter to the definition. However, there is a lot of management literature on the effects of team-building exercises, a class of interventions in which socializing between employees is thought to improve an organization's "climate", "culture", or "effectiveness". These can readily be interpreted as changes in equilibria. A meta-analysis of this very large literature is found in Klein, DiazGranados, Sales, and Le (2009).

III. Theory and Research Questions

We first look at a game between two players who do not know each other in advance, do not observe each other's moves, and do not meet at any time after the task. The game is very similar to that used in Charness and Dufwenberg, 2006. Two players, the investor and the operator, make simultaneous moves; the investor decides between IN ("invest") and OUT ("outside option"), and the operator between KEEP ("hold up") and ROLL ("implement the proposed, but risky, venture"). If the investor selects OUT, both parties get *1* no matter what the operator chooses. However, if the investor selects IN, payoffs do depend on the operator*'s* choice: When they pick KEEP, the operator gets $\kappa > 2$ and the investor gets *0.* When the operator picks ROLL, they get σ 田 $(\kappa - [1 - q]\pi, \kappa)$ while the investor gets *0* with probability q and $\pi > (\kappa - \sigma)/(1 - q)$ with probability $1 - q$.[9] Figure 1 gives the game matrix.

Figure 1

Basic Investor-Operator Game

Investor, Operator expected payoffs	KEEP	ROLL
OUT	*1, 1*	*1, 1*
IN	*0,* κ	$(1 - q)\pi$, σ

[8] The first point is made in the literature on psychological game theory (e. g. Charnes and Dufwenberg, 2006) and the second is made by Tingley and Walter (2011).

[9] We use this construction (with $q > 0$) to enable the operator to play KEEP without the investor knowing for sure that she did so. While it seems intuitive that the operator would worry about this (they obviously "shouldn't" when the players have no common acquaintances and will not meet again), the construction did in fact result in more of the operators playing KEEP in our pilot studies.

The parametric assumptions imply that the investor plays OUT in all Nash equilibria and that (IN, ROLL) is first best.

Contrary to the above analysis, experiments on many similar one-shot games have shown that some pairs manage to end up in the first best outcome (Johnson and Mislin, 2011). This is often thought of as the result of players anticipating feeling guilty if they play the Nash moves (Attanasi, Battigalli, and Manzoni, 2016). Equivalently, we can imagine that operators feel bad if they violate cooperative norms by betraying trust. If the disutility of guilt is g the game changes to that in Figure 2. (Since the players do not meet after the game, these additional terms only have internal motives.)

Figure 2

Investor-Operator Game with Cooperative Norms

Investor, Operator expected payoffs	KEEP	ROLL
OUT	*1, 1*	*1, 1*
IN	*0, $\kappa - g$*	*$(1-q)\pi$, σ*

As can be seen, if it is common knowledge that $g > \kappa - \sigma$ and $(1-q)\pi > 1$, the efficient (IN, ROLL) is a Nash equilibrium. If the investor is uncertain about the magnitude of g but believes that it is larger than $\kappa - \sigma$ with probability p, (IN, ROLL) is still a Nash equilibrium if $g > \kappa - \sigma$ and $p(1-q)\pi > 1$. So we can think of investors playing IN when they have a high level of trust in their operators and the latter playing ROLL when they place a high value on following cooperative norms. Our main hypothesis is that the players, if they spend time together prior to playing the game, could develop an element of trust and cooperative norms, thereby growing the values of g (and thus p).

We can investigate the size and nature of the small talk effect by comparing games with and without small talk in the following ways: (i) Do more games end in (IN, ROLL) after small talk? (ii) Do more investors trust their operators after small talk and therefore play IN? (iii) Do more operators play ROLL after small talk, thereby rewarding the trust placed in them by the investors? (iv) Does small talk allow investors to identify more trustworthy operators? If so, investors who play IN after small talk have a better chance of their opponent playing ROLL than

investors who play IN without small talk. (v) Are investors who in general are more trusting of others more likely to play IN? If so, their scores on a generalized trust scale (Yamagishi & Yamagishi 1994) should correlate with them playing IN.

In the second experiment we look at a twice repeated Stag Hunt game. In the STAG, STAG outcome, the players share *s*, and in the HARE, HARE outcome, they both get *h.* If they fail to coordinate, the STAG hunter gets *0* while the player going for a HARE gets $h + c$.[10] The game matrix is given in Figure 3.

Figure 3

Stag Hunt Game

Hunter payoffs	STAG	HARE
STAG	*s/2, s/2*	*0, 1 + c*
HARE	*1 + c, 0*	*1, 1*

If we assume that $2 > s/2 - c > 1 > 1 - c$, there are two equilibria and the risk-dominant, but inefficient (HARE, HARE) equilibrium is often played because players are uncertain about each other. If we introduce guilt and cooperative norms, the stage game changes to that depicted in Figure 4.

Figure 4

Stag Hunt Game with Cooperative Norms

Row, Column Hunter payoffs	STAG	HARE
STAG	*s/2, s/2*	*0, 1 + c - g*
HARE	*1 + c - g, 0*	*1 - g, 1 - g*

[10] $c > 0$ reflects the fact that it is easier to catch a hare when nobody else is hunting them.,

So (STAG, STAG) is the only Nash equilibrium if $g > 1$. To think about what happens if two opponents both are uncertain about the magnitude of their opponent's *g,* we will look at a very simple example. Suppose that *g* can be either *0* or $G > 1$, that the realizations are iid., and that they both assign probability *p* to the larger value. (Note that we do not assume that *p* is correct even in an aggregate sense.) In this case, all players with *G* realizations play STAG while the play of those with *0* realizations depend on *p*. Specifically, if $p < (s/2 - c)^{-1}$, the latter group plays HARE but if $p > (s/2 - c)^{-1}$ they play STAG.[11] So if players believe that small talk makes it more likely that their opponents will have *G* realizations, they will be more likely to play STAG. In other words, playing STAG depends on believing that the opponent will want to adhere to cooperative norms.

We can test this by asking the following questions: (vi) Do more games end in (STAG, STAG) after small talk? (vii) Conversely, do fewer games end in (HARE, HARE) after small talk? (Recall that they do not know that their second activity consists of the same game a second time.) (viii) Do more games change from the inefficient to the efficient equilibrium after small talk? (ix) Do more games change from the inefficient equilibrium to a non-equilibrium outcome after small talk? (x) Do more games change from a non-equilibrium to the efficient equilibrium after small talk?

IV. Experiments and Results

All studies used US residents aged 25 and up (to help ensure that they share similar norms and beliefs) and were run on Amazon Mechanical Turk. Subjects were paid their winnings. The exact procedures and instructions are reproduced in Appendix B.

Study 1: Small talk increases trust and cooperation in a one-shot game.

Pairs of subjects engage in Investor-Operator games with the following payoff matrix:

Figure 5

[11] Proof in Appendix A

Investor-Operator Game with Parameter Values Used in Study 1

Investor, Operator expected payoffs	KEEP	ROLL
OUT	*3.5, 3.5*	*3.5, 3.5*
IN	*0, 9*	*(2/3) x 7.5, 5*

We compare the outcomes of this game in two different treatments:

-Treatment 1: Players are informed about, and play, the game. They do not meet or see each other. The players end by filling out the six-item trust scale from Yamagishi & Yamagishi (1994).

-Treatment 2: Opponents spend 3 minutes together on a videocall.[12] After the video call, they are informed about, and play, the game. The players end by filling out the six-item trust scale.

The number of agents choosing each action are shown in Table 1 below.

Table 1

A. Treatment 1: No Contact

Investors	OUT	IN	Totals
	68	65	133
Operators	KEEP	ROLL	
	61	80	141

Totals are different because agents play without interacting with specific opponents.

B. Treatment 2: Small Talk

[12] We seed the conversations in two different ways. Some pairs are encouraged to use the time to identify the two most interesting things they have in common. If they independently report the same two things afterwards, they get a reward. Other pairs answer ten binary lifestyle questions (rural/urban, tacos/sushi, beach/mountain, etc.). Each pair is then told, prior to engaging in the 3-minute video conversation, on which of the ten questions they agree. Since these perform identically, we present the pooled data. In particular, the number of questions on which the players agree does not correlate with their actions.

Pairs	KEEP	ROLL	Totals
OUT	16	22	38
IN	29	54***	83***
Totals	45	76	121

Significantly different from the proportion in Treatment 1, *** $p < .01$, Chi Square-test

We will now turn to answer questions (i) – (v) from Section III.

(i) Since the subjects did not interact in Treatment 1, they did not play against specific opponents. However, the expected fraction of games ending in (IN, ROLL) was (65/133) x (80/141) = 0.28, while it was 0.45 ($p = .004$) in Treatment 2. The difference between Treatments 1 and 2 is consistent with our main hypothesis, that more games end in (IN, ROLL) after small talk.

(ii) The fractions of investors playing IN was 0.49 in Treatment 1 and 0.69 ($p = .001$) in Treatment 2. So investors appear to be more willing to trust operators after small talk.

(iii) On the other hand, the fraction of operators who played ROLL was 0.57 in Treatment 1 and 0.63 *($p = .32$)* in Treatment 2. The results are directionally consistent with the operators anticipating feeling guilty after playing KEEP and violating cooperative norms, but the effects are not significant. So we cannot conclude that operators follow cooperative norms more closely after small talk. [13]

(iv) If an investor plays IN, the chance that his opponent plays ROLL is 0.65 in Treatment 2 while the fraction are operators playing ROLL after their opponents played OUT is .58 ($p = .44$). Similarly, if an operator plays ROLL, the chance that his opponent plays IN is .71 in Treatment 2 and the fractions of investors who play IN after their opponents played KEEP are .64 ($p = .44$). Since these are not significantly different, we also cannot conclude that agents after small talk can tell whether their opponent is more trustworthy or trusting.

(v) We estimate two logit models predicting whether investors play IN and operators play ROLL as functions of their scores on the trust scale. When we pool the data across both Treatments, this gives:

[13] As mentioned in footnote 3, there is some indication that this is a type 2 error. In our initial pilot studies and data collected ex post, a smaller fraction of operators choose ROLL in treatment 1.

Table 2

Logit Regressions

	Prob(IN)	Prob(ROLL)
Constant	-2.52****	-0.11
Trust score	0.79****	0.13
N	254	251
Pseudo R^2	0.0551	0.0021

Significantly different from *0*, ****$p < .001$, t-test

Not surprisingly, more trusting investors are more likely to play IN while trust gives us no information about the play of operators.[14]

While study 1 was concerned with the effect of small talk on trust and cooperation, study 2 is focused on cooperative norms. However, it also tackles the question of whether small talk might help move players from inefficient outcomes and equilibria to more efficient ones.

Study 2: Small talk can allow players in a repeated game to move from one stage game equilibrium to another.

Pairs of subjects engage in two Stag Hunt games with the following payoff matrix:[15]

Figure 6

Stag Hunt Game with Parameter Values Used in Study 2

[14] Consistent with this, investors who engaged in small talk did not have significantly higher trust scores than those who did not. So there is no short-term increase in general trust after an episode of small talk.

[15] Dal Bo, Frechette, and Kim (2021) look at the relationship between payoff matrices and equilibrium selection in stag hunt games. Our findings are consistent with theirs.

Hunter payoffs	STAG	HARE
STAG	\$4, \$4	\$1, \$3
HARE	\$3, \$1	\$3, \$3

None of the players know their opponents prior to the first round. Half the pairs play the second game immediately after the first, but the other half have a three-minute face-to-face meeting between the two games (and thus meet).[16] The latter group knew that they were to engage in an "task" after talking but did not know that it turned out to be the same game.

We ran the experiment with 55 pairs that did not engage in small talk between games and 60 pairs that did. Looking first at the condition with no small talk between games, (HARE, HARE) was played by 18 pairs and (STAG, STAG) was played by 10. All of these played the same equilibrium on the second game. Of the 27 pairs who did not play an equilibrium in the first game, 18 went to (HARE, HARE), only one went to (STAG, STAG), and eight again failed to find an equilibrium. So in the second game, a total of 36/55 = 0.65 of the pairs played (HARE, HARE) while only 11/55 = 0.2 played (STAG, STAG).

In the condition with small talk between games, we ran 60 pairs and 28 played (HARE, HARE) in the first game. Four of these switched to (STAG, STAG) in the second, while 23 continued to play (HARE, HARE). In the same condition, six pairs started with (STAG, STAG) and all of these played the same equilibrium in the second game. Of the 26 pairs who did not find an equilibrium in the first game, 20 went to (STAG, STAG) and four ended up playing (HARE, HARE). So in the second game, 27/60 = 0.45 of the pairs played (HARE, HARE) while 30/60 = 0.50 played (STAG, STAG), many more than without small talk. The data in Table 3 summarizes the higher efficiency in the condition with small talk.

Table 3

Increased Efficiency Following Small Talk

Fraction of pairs	No small talk	Small talk between games
Playing efficient equilibrium in second game	11/55	30/60****

[16] We did not seed these conversations, but it is possible that they discussed the game.

Playing inefficient equilibrium in second game	36/55	27/60**
Switching from inefficient to efficient equilibrium	0/18	4/28
Switching from non-equilibrium to inefficient equilibrium	18/27	4/26****
Switching from non-equilibrium to efficient equilibrium	1/27	20/26****

Significantly different from the results in column 1, **** $p < .001$,** $p < .05$.

(vi) As hypothesized, the fraction of pairs who play (STAG, STAG) in the second game is significantly higher after small talk ($p = 0.0008$, Chi square test).

(vii) The fraction of pairs who play (HARE, HARE) in the second game is significantly smaller ($p = 0.028$, Chi square test).

(viii) Four games do change from the inefficient equilibrium all the way to the efficient equilibrium after small talk, but the effect is not significant ($p = .14$, Fisher test).

(ix) More games change from the inefficient equilibrium to a non-equilibrium outcome after small talk ($p = .0002$, Fisher test).

(x) More games change from a non-equilibrium outcome to the efficient equilibrium after small talk ($p = .0000$, Fisher test).

Taken together, the results strongly suggest that the players follow cooperative norms more closely after small talk. In addition, they show that our simple intervention can help migrate a finitely repeated game to a more efficient equilibrium.

V. Discussion

It has long been known that people divide others into in-groups and out-groups and that they favor members of their in-group. We show that a very limited amount of small talk can cause people to trust and cooperate with strangers. Small talk overcomes contractual incompleteness by covering a broad range of contingencies, including some that are truly unforeseen (e.g., our subjects socialize before they know which game they are to play). We also

show that small talk can be used effectively to change a finitely repeated game from a less efficient equilibrium to a more efficient one.

The results provide one explanation why people appear eager to "get to know" potential trading partners, as well as the popularity of networking. Our results also apply to cases in which employees represent firms or governments in dealings with outsiders where it sometimes is known as cronyism, nepotism, patronage, or clientelism. Consistent with the observation that these practices work much like formal contracts, we conjecture that they are more important and more common in societies where the rule of law is weaker, and trust is higher.[17] It is an important and promising goal of future research to test these conjectures.

The effect of small talk is not limited to arms-length trades but extends into firms. One example is the widespread use of "team building" exercises by which firms try to build more cooperation between employees by putting them through a number of activities that require trust and cooperation.[18] It is also widely believed that "knowing your boss" confers advantages in situations where discretionary decisions are made. We conjecture that this is more important in societies with less efficient labor markets.

[17] Kesse et al (2020) show that prosocial norms are shaped by social environments.
[18] Buller and Bell (1986) remark that "one of the most popular intervention techniques in organizational development (OD) is teambuilding".

References

Attanasi, Giuseppe, Pierpaolo Battigalli, and Elena Manzoni, "Incomplete-Information Models of Guilt Aversion in the Trust Game," *Management Science*, 62, pp. 648-667.

Balliet, Daniel, "Communication and Cooperation in Social Dilemmas: A Meta-Analytic Review", *Journal of Conflict Resolution,* 52(1), pp. 39-57, 2010

Belot, Michele, V. Bhasar, and Jeroen van de Ven, "Promises and Cooperation: Evidence from a TV Game Show", *Journal of Economic Behavior and Organization,* 73, pp.396-405, 2010.

Bicchieri, Christina, and Azi Lev-On, "Computer Mediated Communication and Cooperation in Social Dilemmas: An Experimental Analysis," *Politics, Philosophy, and Economics*, 6, pp. 139-168, 2007.

Bohnet, Iris, and Bruno Frey, "Social Distance and Other-Regarding Behavior in the Dictator Games: Comment", *American Economic Review,* 89, pp. 335-39, 1999.

Bouas, Kelly S., and Samuel S. Komorita, "Group Discussion and Cooperation in Social Dilemmas", *Personality and Social Psychology Bulletin,* 22, pp. 1144-50, 1996.

Brooks, Allison Wood, Hengchen Dai, and Maurice E Schweitzer, "I am sorry about the rain! Superfluous Apologies Demonstrate Empathic Concern and Increase Trust", *Social Psychological and Personality Science,*5, pp. 467-74, 2013.

Buller, Paul, and Cecil Bell, "Effects of Team Building and Goal Setting on Productivity: A Field Experiment", *Academy of Management Journal,* 29, pp. 305-28, 1986.

Camerer, Colin, and Richard Thaler, "Anomalies: Ultimatums, Dictators, and Manners", *Journal of Economic perspectives,* 9, pp.209-19, 1995.

Charness, Gary, and Martin Dufwenberg, "Promises and Partnership", *Econometrica,* 74, pp. 1579-1601, 2006.

Coleman, James, "Social Capital in the Creation of Human Capital", *American Journal of Sociology,* 94, pp. S95-S120, 1988.

Dal Bo, Pedro, Guillaume R. Frechette, and Jeongbin Kim "The Determinants of Efficient Behavior in Coordination Games", *Games and Economic Behavior,* 130, pp. 352-68, 2021.

Deutsch, Morton, "Trust and Suspicion", *Journal of Conflict Resolution*, 2, pp. 256-79, 1958.

Edelman, Benjamin, Michael Luca, and Dan Svirsky," Racial Discrimination in The Sharing Economy: Evidence from a Field Experiment", *American Economic Journal: Applied Economics,* 9, no. 2, pp. 1 – 22, 2017.

Efferson, Charles, Raphael Lalive, and Ernst Fehr, "The Coevolution of Social Groups and Ingroup Favoritism", *Science,* 321 (5897), pp. 1844-49, 2008.

Ert, Eyal, Aliza Fleischer, and Nathan Magen, "Trust and Reputation in the Sharing Economy: The Role of Personal Photos in Airbnb", *Tourism Management* 55, pp. 62-73, 2016.

Fehr, Ernst, and Klaus Schmidt, "A Theory of Fairness, Competition, and Cooperation", *Quarterly Journal of Economics,* 114, pp. 817-68.

Frank, Robert H., "If Homo Economicus Could Choose his Own Utility Function, Would He Want One with A Conscience?", *American Economic Review,* 77, pp. 593-604, 1987.

Frydlinger, David, and Oliver Hart, "Guiding Principles", Working Paper, Harvard University, 2019.

Gibbons, Robert S., Manuel Greider, Holger Herz, and Christian Zehnder, "Building an Equilibrium: Rules versus Principles in Relational Contracts", *Organization Science,* forthcoming, 2021.

Goette, Lorenz, David Huffman, and Stephan Meier, "The Impact of Group Membership on Cooperation and Norm Enforcement: Evidence Using Random Assignment to Real Social Groups", *American Economic Review,* 96, no. 2 (May), pp. 212-16, 2006.

Gneezy, Uri, "Deception: The Role of Consequences", *American Economic Review,* 95, pp. 384-94, 2005.

Gneezy, Uri, Agne Kajckaite, and Joel Sobel, "Lying Aversion and the Size of the Lie", *American Economic Review,* 108, pp. 419-53, 2018.

Johnson, Noel D., and Alexandra A. Mislin, "Trust Games: A Meta Analysis", *Journal of Economic Psychology*, 32, pp. 865-889.

Kahneman, Daniel, Jack Knetch, and Richard Thaler, "Fairness as a Constraint on Profit Seeking: Entitlements in the Market", *American Economic Review,* 76, 728-41, 1986

Kandori, Michihiro, "Social Norms and Community Enforcement", *Review of Economic Studies,* 59, pp. 63-80.

Karlsson, Logi, Astrid Kemperman, and Sara Dolnicar, " May I sleep in Your Bed? Getting Permission to Book", *Annals of Tourism Research,* 62, pp, 1 – 12, 2017.

Kartik, Navin, "Strategic Communication with Lying Costs", *Review of Economic Studies,* 76, pp.1359-95, 2009.

Kesse, Fabian, et al., "The Formation of Prosociality: Causal Evidence on the Role of the Environment", *Journal of Political Economy,* 128, pp. 434-67, 2020.

Klein, Cameron, Deborah DiazGranados, Eduardo Sales, and Huy Le, "Does Team Building Work?", *Small Group Research*, 40, pp 181-220. 2009.

Lundquist, Tobias, Tore Ellingsen, Erik Magnus Johannesson, "The Aversion to Lying", *Journal of Economic Behavior and Organization,* 70, pp, 81-92, 2009.

Mazar, Nina, On Amir, and Dan Ariely, "The Dis-honesty of Honest People: A Theory of Self-concept Maintenance", *Journal of Marketing Research,* 45, pp. 633-44, 2008.

Nowak, Martin, Corina Tarnita, and Edward O. Wilson, "The Evolution of Eusociality", *Nature*, 466, pp. 1057-62, 2010.

Rand, David, Thomas Pheffer, Anna Dreber, Rachel Sheketoff, Nils Wernerfelt, and Yochai Benkler, "Dynamic Remodeling of In-group Bias During the 2008 Presidential Election", *Proceedings of the National Academy of Sciences,* 106 (15), pp. 6187-91, 2009.

Roth, Alvin E., "Bargaining Experiments", in *Handbook of Experimental Economics.* John H. Kagel and Alvin E. Roth, Eds., Princeton, NJ: Princeton University Press, 1995.

Subramaniam, Jeevan, "Small Talk Helps to Establish Trust", ideas.bkconnection.com/5-ways-small-talk-serves-a-big-purpose , accessed 5/11/2012.

Taylor, Donald, and Janet Doria, "Self-serving and group-serving Bias in Attribution", *Journal of Social Psychology,* 113 (2) pp. 201-11, 1981.

Tingley, Dustin, and Barbara Walter, "Does Cheap Talk Matter? An Experimental Analysis", *Journal of Conflict Resolution,* 55, pp. 996-1020, 2011

Wikijob Team, "The Best Ways to Make Business Small Talk", https://www.wikijob.co.uk/content/features/useful-resources/best-ways-make-business-small-talk, accessed 5/11/2012.

Wilson, Edward O., *The Social Conquest of Earth,* New York, NY: W. W. Norton, 2012.

Yamagishi, Toshio, and Midori Yamagishi. 1994. "Trust and Commitment in the United States and Japan." *Motivation and Emotion* 18 (2): 129–66. https://doi.org/10.1007/BF02249397.

APPENDIX A

Equilibrium in stag hunt game with incomplete information

Proposition: *All players with G realizations play STAG, while the play of those with 0 realizations depend on p. Specifically, if* $p < (s/2 - c)^{-1}$*, the latter group plays HARE, but if* $p < (s/2 - c)^{-1}$ *they play STAG.*

Proof: (1) *Players with G realizations play STAG.* Let q be the fraction of opponents that play STAG. A player with an *G* realization will also play STAG if $qs/2 > q(1 + c - G) + (1 - q)(1 - G) \Leftrightarrow q(s/2 - c) + G > 1$. This is true for all $q \geq 0$.

(2) *Players with 0 realizations play HARE if* $p < (s/2 - c)^{-1}$ *and STAG if* $p > (s/2 - c)^{-1}$. If $p < (s/2 - c)^{-1}$, the players assume that p of all opponents pay HARE and prefer to do the same if $p(1 + c) + (1 - p) > ps/2 \Leftrightarrow p < (s/2 - c)^{-1}$. If $p > (s/2 - c)^{-1}$ the players assume that all opponents play STAG and prefer to do the same if $s/2 > 1 + c$, which is true by assumption.

QED.

APPENDIX B

Procedures and instructions for the two experiments

Experiment 1: Investor-Operator game

1. Subjects are recruited via Amazon Mechanical Turk. They report being resident in the United States and being 26 years old or older.
2. Subjects enter the experiment and are consented
3. Subjects proceed to a screening task. In this task, subjects transcribe some nonsense text according to some rules that are given (e.g., "Only transcribe the first and fourth sentences. Make sure each sentence you transcribe has an exclamation point at the end"). This task is easy for native speakers and is meant to screen out subjects who do not speak English well.
4. Subjects proceed to the main task. Some answer a series of lifestyle questions before proceeding (rural/urban, tacos/sushi, beach/mountain, etc.). Others are asked to try to find the two most interesting things they have in common.
5. Subjects enter a waiting room where they are given the opportunity to play a game while they wait for a partner. Once a suitable partner has entered the waiting room, the two are paired and the game proceeds. There is a maximum wait time of 10 minutes, for which they are paid.

   (i) In the case of Treatment 1, the two simply proceed to the next step

   (ii) In the case of Treatment 2, the subjects have a video chat for three minutes with the instruction to find the most interesting thing they have in common. Subjects often fail to get their video equipment working, so if a subject reports his partner has not been able to video chat for more than a minute that subject tries a new partner.

   (iii) The pairs who answered the ten lifestyle questions are shown what answers they had in common but are given no instruction other than to chat with their partner.
6. Subjects are then instructed in the rules of the Investor / Operator game. The rules to the game are then reproduced at the bottom of subsequent pages. Subjects must spend two minutes on this page.

7. Subjects are given a series of comprehension questions, and are not allowed to proceed until they get them right.
8. Subjects play a practice game
9. Subjects are notified that on the next page they will play the game for real with their partner
10. Subjects then play the Investor / Operator game for real
11. Subjects wait a few seconds to make sure their partner has moved
12. Subjects then answer a variety of demographic questions
13. Subjects fill out a six-item trust scale
14. Subjects are told the results of the game, are debriefed, and paid.

Experiment 2: Twice-repeated Stag Hunt

1. Subjects are recruited via Amazon Mechanical Turk. They report being resident in the United States and being 26 years old or older.
2. Subjects enter the experiment and are consented
3. Subjects proceed to a screening task.
   (i) In the treatment with no small talk, subjects transcribe some nonsense text according to some rules that are given (e.g., "Only transcribe the first and fourth sentences. Make sure each sentence you transcribe has an exclamation point at the end"). This task is easy for native speakers and is meant to screen out subjects who do not speak English well.
   (ii) In the treatment with small talk, subjects give a code word to an experimenter via video, and the experimenter gives a corresponding code word which allows the subject to proceed. This verifies that the subject can speak English and that the subject has working video equipment.
4. Subjects enter a wait room where they wait to be paired with a partner. They are able to play a game while they wait if they wish. There is a maximum wait time of 10 minutes, for which they are paid.
5. Subjects proceed to the main task, which begins with an explanation of the rules to the Stag Hunt game (cast as Rabbit / Buffalo due to higher comprehension). The rules are

reproduced at the bottom of subsequent pages. Subjects must spend two minutes on this page.

6. Subjects are given a series of comprehension questions, and are not allowed to proceed until they get them right.
7. Subjects play a practice game
8. Subjects are notified that on the next page they will play the game for real with their partner.
9. Subjects then play the Stag Hunt game for real
10. Subjects wait a few seconds to make sure their partner has moved
11. Subjects either video chat or proceed

    (i) In the treatment with no small talk, subjects are told the result of the first game and proceed.

    (ii) In the treatment with small talk, subjects learn the result of the game and are told, "You have finished this game and will now video chat for three minutes with the person you just played with before moving on to the next task" in order to make it non-obvious that they will be playing the exact same game again. Subjects then talk with their partner for three minutes. They are told, "You will talk with your partner from the last game for 3 minutes before we move on to the next phase of the task.". They must exchange a code word with each other in order to move on, verifying that the video chat happened.
12. Subjects are then told that they will play the same game again with the same person.
13. Subjects make their decision for the second Stag Hunt game
14. Subjects wait a few seconds to make sure their partner has moved
15. Subjects are told the results of the second game
16. Subjects then answer a variety of demographic questions
17. Subjects fill out a six-item trust scale
18. Subjects are told their earnings breakdown, are debriefed, and paid