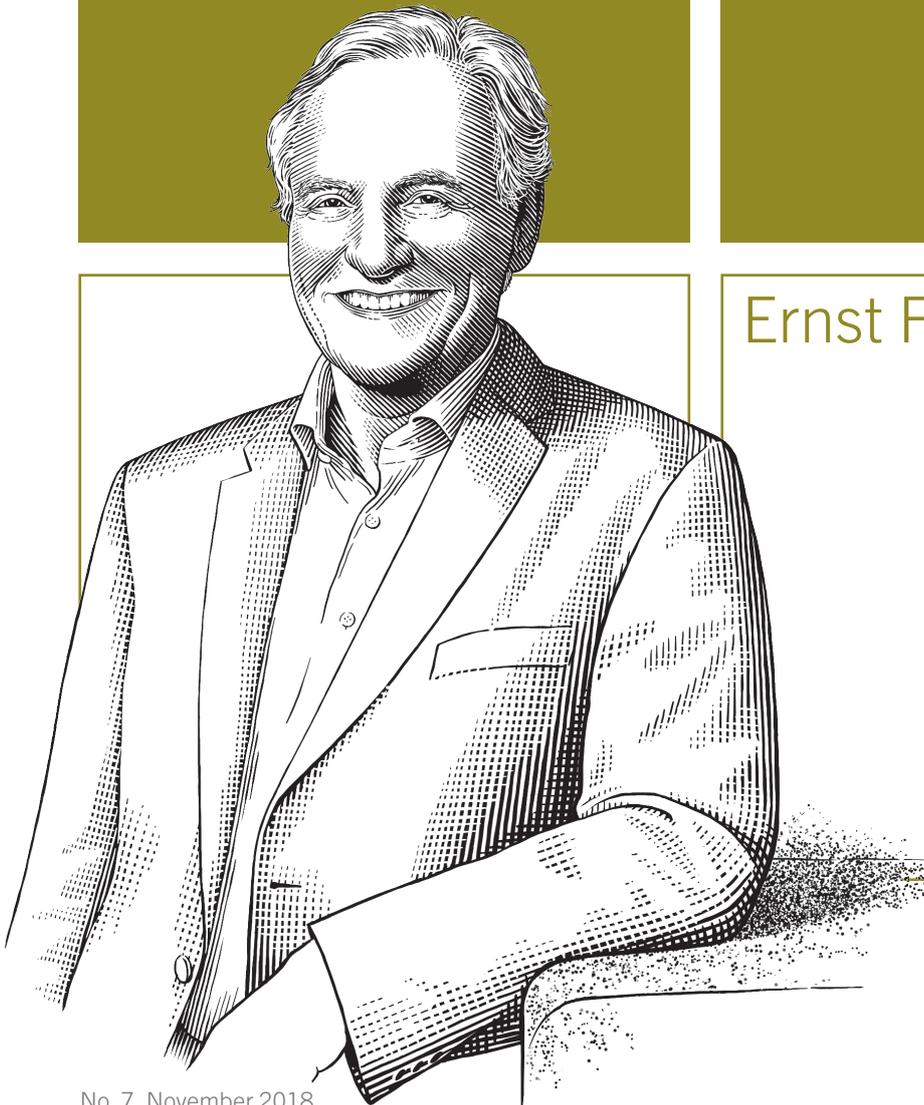


UBS Center  
Public Paper #7

# Behavioral Foundations of Corporate Culture



Ernst Fehr

# Editorial

Dear reader

The buzz around corporate culture has been loud for some time. Big tech firms such as Google and Twitter have gained public attention for their modern and innovative work styles, fostering an almost hedonistic business culture. And it would seem their success proves them right. But fancy perks like nap pods and on-site physicians are not enough for a good corporate culture. So, before you start picking out the perfect spot for your game corner, it is important to know what an effective corporate culture looks like. For this, we need to understand how culture drives business success. We need to ask the right questions, for example: How can you make your employees follow your code of ethics? How can you motivate everyone to act in the company's best interest? To answer these and similar questions, we go back to one of the main success factors of humankind: our ability to cooperate. Cooperation, indeed, turns out to be one of the core elements of a successful corporate culture.

There are many views and opinions on what a good corporate culture is like. But

they often lack a sound understanding of what drives behavior in a company. Experimental and behavioral economics sheds light on the underlying decision-making processes and helps managers to positively influence their employees' behavior. Based on scientific data, it provides answers to questions such as which rules and incentives are needed for a successful corporate culture, how can we limit free-rider effects, and how can we foster productive and constructive cooperation among employees? Finding answers to these questions is important, because you certainly do not want your employees ending up like the hen and the pig in the fable below.

All that remains is to wish you a good read through the behavioral foundations of corporate culture.

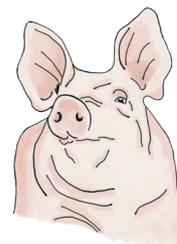
Dr. Ladina Jenal  
COO, UBS International Center of  
Economics in Society

Hen said to pig: "You know, we ought to cooperate. So many people like ham and eggs."



"Don't worry," said hen,  
"someone is always the loser  
when folks cooperate."

Pig said: "What a brilliant idea!" The pig started thinking, and after some time said: "What will actually happen to me?"



Source: Folk tale. Illustration by Maura Wyler.

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# About the author

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Ernst Fehr has been Professor of Microeconomics and Experimental Economics at the University of Zurich since 1994. He served as director of the Institute for Empirical Research in Economics and chairman of the Department of Economics at the University of Zurich. He currently serves as director of the UBS International Center of Economics in Society. He has been a Global Distinguished Professor at New York University since 2011 and was an affiliated faculty member of the Department of Economics at MIT from 2003 to 2011. He is a former president of the Economic Science Association and of the European Economic Association, an honorary member of the American Academy of Arts and Sciences, and John Kenneth Galbraith Fellow of the American Academy of Political and Social Sciences. He was recipient of the Marcel Benoist Prize in 2008 and the Gottlieb Duttweiler Prize in 2013.

Ernst Fehr has numerous publications in international top journals including *Science*, *Nature*, *Quarterly Journal of Economics*, *American Economic Review*, and *Econometrica*. His research focuses on the proximate patterns and the evolutionary origins of human altruism and the interplay between social preferences, social norms and strategic interactions. He has conducted extensive research on the impact of social preferences on competition, cooperation and on the psychological foundations of incentives.

## Extended abstract

Talking about corporate culture has become quite popular in the business world. But why should companies care about corporate culture at all? Why do “soft” concepts like culture matter? Can’t companies simply rely on “hard” facts – the value of clear and efficient institutional rules and incentives?

In this Public Paper, we argue that corporate culture is important because human behavior is always co-determined by the prevailing social norms. It is in the company’s interest to shape these norms through a cooperative culture that mobilizes employees’ voluntary cooperation in the pursuit of the firm’s performance goals. Our research provides behavioral foundations for cooperative cultures, based on important scientific insights from contract economics as well as from experimental and behavioral economics.

In particular, contractual incompleteness, the imperfections of centralized monitoring, and limits to contract enforcement naturally constrain firms’ ability to regulate and direct their employees’ behavior. This causes severe free-rider problems, which can be solved with cooperative corporate cultures based on social norms that increase the company’s overall performance. We show that a large share of the people is typically willing to follow prosocial norms at least partially if they believe that other people and, in particular the top leaders, will also comply. An important reason to legitimize cooperative norms, perhaps the most important one, is that they transparently increase the firm’s overall value and generate long-run benefits for the involved parties.

As a firm’s workforce is typically composed of people with different propensi-

“Culture, more than rule books, determines how an organization behaves”

Warren Buffet in one of his biennial letters to Berkshire Hathaway Managers

ties for voluntary cooperation, it is inevitable that some of them will free ride on others’ efforts if sanctions do not enforce rules and norms. The failure to comply with norms has the tendency to spread if appropriate measures do not constrain it. However, forces similar to those that lead to contractual incompleteness and imperfect monitoring also limit the centralized enforcement of norms. Peer feedback and peer sanctioning are therefore required for implementing and enforcing a cooperative culture. The optimal conditions for the effectiveness of peer feedback exist when it is an integral part of a company’s corporate culture and when all involved parties recognize that peer feedback increases the firm’s overall performance and all stakeholders benefit from it.

Classifying corporate culture problems along the two dimensions “willingness to cooperate” and “awareness of negative externalities” has proven to be useful for determining the appropriate set of measures for solving these problems. Depending on the problem, the measures are in the areas of “changing awareness”, “changing incentives and motivation”, or both.

A final important lesson is that the mere proclamation of abstract values does not suffice for achieving a cooperative cul-

ture. These values need to be translated into concrete behavioral rules on the “shop floor” that are widely shared and enforced by top management and the employees themselves. To engineer com-

To engineer compliance, the behavioral rules must be clear and simple.

pliance, the behavioral rules must be clear and simple. Further, they must transparently contribute to a firm-specific public good, such that employees can agree with them – because otherwise they will not enforce them.

# What is “corporate culture”?

Every company has a corporate culture. Some companies shape their culture deliberately and according to well-founded principles, in others it emerges from uncontrolled and poorly understood processes, operating behind the management’s veil of ignorance. We define corporate culture as the *set of formal and informal social norms in a company* that affect employee’s perceptions, motives, intentions, and behaviors. Because corporate culture is an important determinant of employees’ behavior it has deep and important effects on companies’ overall performance.

Social norms are defined as a *group’s commonly known standards of behavior that are based on widely shared views of how individual group members ought to behave in given situations*.<sup>1</sup> “Widely shared” means that group members know and widely approve the standard and that this widespread approval is generally known. There are many examples of business-related social norms such as “always treat others with respect”, “don’t share confidential information” or “inform clients honestly about both advantages and disadvantages of the firm’s products”.

In the business context, the group to which a normative standard applies may comprise all of the company’s employees or a subset of them. The set of situations in which a company’s normative standards apply is very large; it typically encompasses how the employees and different departments interact with each other, how employees behave towards their managers and vice versa, and how employees behave towards the company’s customers and input suppliers. Companies often codify some normative standards in the form of explicit, written

rules – for example, in the form of a code of ethics. However, a large number of standards remain informal: although unwritten, the employees subject to such normative standards know and share them widely, and act according to them.

Corporate culture has deep and important effects on companies’ overall performance.

# Why corporate culture matters ...

Normative principles of behavior inevitably emerge when people interact with each other – in fact, there appear to be no human societies without some form of normative governance. Thus, companies cannot prevent social norms from permeating their employees' behaviors. But are the prevailing norms conducive or dysfunctional for the company's overall goals? Moreover, does the management have the right insights and tools to shape these norms?

Why should management care about the prevailing informal norms and the associated corporate culture? In most companies, management uses carrots – various forms of reward – and sticks – sanctions – to regulate employees' behavior. Thus, why is it not possible to induce almost any desired behaviors by rewarding employees, and to rule out undesirable behaviors by imposing appropriate sanctions? Why can't the company just set up a system where every employee works under an enforceable contract that induces those behaviors that are most conducive for company performance?

Corporate culture matters because employment contracts are necessarily fundamentally incomplete.<sup>2-4</sup> In principle, employers can provide incentives that are associated with employees' effort behavior or with their output. Notice that the notion of "effort" goes far beyond what everyday language associates with effort; it includes every behavior and mental operation that has pecuniary or psychological costs for the employee and provides benefits (i.e., output) for the company. It is typically not possible to stipulate the dimensions and the quantity of current and future effort levels in a contract that is suffi-

ciently precise – nor are the various dimensions of effort objectively verifiable. Likewise, it is impossible to define and verify precisely the current and future output for most employees. These limits to defining, measuring and monitoring an employee's effort and output necessarily limit the regulatory power of explicit rewards and sanctions. Employees therefore have many opportunities to reduce their effort without worrying too much about sanctions. Likewise, there are many situations where extra effort remains undetected and thus unrewarded. In other words, many employees affect companies' overall performance positively without being rewarded, or negatively without being sanctioned.

A *cooperative corporate* culture bridges the inevitable gap that arises from the limits of formal rewards and punishments due to incomplete contracts, imperfect monitoring and imperfect verifiability. A cooperative corporate culture makes it more likely that employees will work diligently even if their behavior cannot be observed, that they will take initiative to improve the firm's operations even if there is no immediate reward, and that they will provide constructive feedback when their colleagues violate normative behavioral standards. In short, a cooperative corporate culture mobilizes employees' "voluntary cooperation" in the pursuit of the firm's overall strategic goals. Note that the term "cooperation" is defined here in an encompassing way and goes far beyond the narrow notion of "people simply coordinating their activities" or "working together".

## ... and why cooperation?

From a firm's viewpoint, it is often very desirable for employees to help each other because it avoids frictions in the production of goods and services that may otherwise occur. However, if employees help each other, the helper has at least a time cost typically without being financially rewarded for helping, nor sanctioned for shirking. In fact, it is simply impossible to enumerate, describe, and contractually fix the myriad of helping opportunities that arise in companies. But why should an employee help if there is only a cost and no reward? This is exactly the kind of dilemma that a cooperative corporate culture helps to resolve.

Winston Churchill once remarked that it is easy to give a speech over 45 minutes but very hard to give one for 45 seconds. Likewise, it is easy to write a long but unfocused mail that informs others in a department of an important issue, but hard to write a short and concise mail. Thus, suppose that an employee, call him or her Andrea, needs to inform 40 colleagues about a new product. Andrea can write a long e-mail in 15 minutes, or a clear and concise one in 45 minutes. The e-mail recipients need seven minutes to read and understand the long one, but only two minutes for the short one. Thus, the long message saves Andrea 30 minutes but imposes time costs of 200 minutes on the other 40 employees. Yet, Andrea has little or no incentive to spend time on a shorter e-mail unless a cooperative culture induces to do so.

Another example relates to sales activities, specifically to how sales people position the advantages of a firm's product and what information they give to customers. The pharmaceutical industry,

which sells drugs to doctors, provides an interesting case here because of the tight legal constraints on what a sales person may claim about a drug. The legally permissible claims are often stated explicitly in the drug's instruction leaflet. However, the sales person may have supplementary knowledge or even privileged information about a drug's positive (or negative) side effects, e.g., because the company has performed further tests. In some cases, advertising additional positive effects to doctors is illegal because the relevant clinical procedures that will eventually grant permission to claim additional benefits have not yet been completed. In this situation, the pharmaceutical sales people have a strong incentive to claim additional drug benefits in personal interactions with doctors because this is likely to increase their sales. This individual behavior may be illegal, and the company may thus risk severe penalties. In fact, the US authorities have imposed harsh financial sanctions – billions of dollars – on several pharmaceutical companies for exactly this type of legal violations, which sales personnel committed in and outside the US.

It is simply impossible to enumerate, describe, and contractually fix the myriad of helping opportunities that arise in companies.

There is a panoply of similar examples across the globe and industries. Think of the "emission scandal" in the automotive industry, where several car producers

used software to deceive regulators measuring emissions from diesel cars. Consider international companies that were involved in bribing public officials to get contracts or legal permissions. Or think of the “Libor scandal”, “currency manipulations”, or the overstepping of risk limits by investment bankers which caused large subsequent losses. In all these examples human behaviors cause the problem and the prevailing corporate culture did not prevent them from happening.

Reducing the role of a cooperative culture to legal and compliance issues is, however, far too narrow. The violation of legal rules is just an extreme form of opportunistic, noncooperative behavior. A company’s daily operations involve a myriad of cooperative behaviors that are necessary for its overall success. Notice that cooperation is not blind obedience and uniformity; it also may involve challenging the prevailing strategy and course of action, and speaking up – a behavior that is perceived as costly by many employees. But the purpose of a cooperative culture is to make employees behave cooperatively despite opportunistic incentives not to do so.

# Cooperative cultures and success

A cooperative culture is characterized by widespread adherence to those normative company standards that facilitate the achievement of the company's goals. Such a culture gives employees a reason to trust that their colleagues will also adhere to the prevalent culture and, as we will show later, this trust will itself drive obedience with the cooperative culture and strengthen it. Companies that establish a cooperative culture should thus be more productive and successful.

A recent study examines the connection between cooperative culture and financial success of the best 100 companies in the US.<sup>5</sup> This study uses the company employees' views to determine how strong the cooperative culture is. The study finds that simply proclaiming and advertising prosocial values such as integrity, ethical conduct, trust, or honesty has no impact on the firms' financial success. However, those firms where the employees perceive their top managers as trustworthy and ethical in their business practices show higher productivity and profits.

Research on national cultures and nations' success reached a similar conclusion regarding the potential value of cooperative cultures. The same key forces that generate trust and trustworthiness at the national level also induce trust within smaller units such as villages, cities, or companies. Regardless of whether we look at companies or communities, official sanctioning systems are quite limited in their ability to regulate behavior. In addition, contracts between independent parties are, in principle, largely subject to the same constraints in terms of completeness and enforceability as employment contracts. Thus, similar limits to

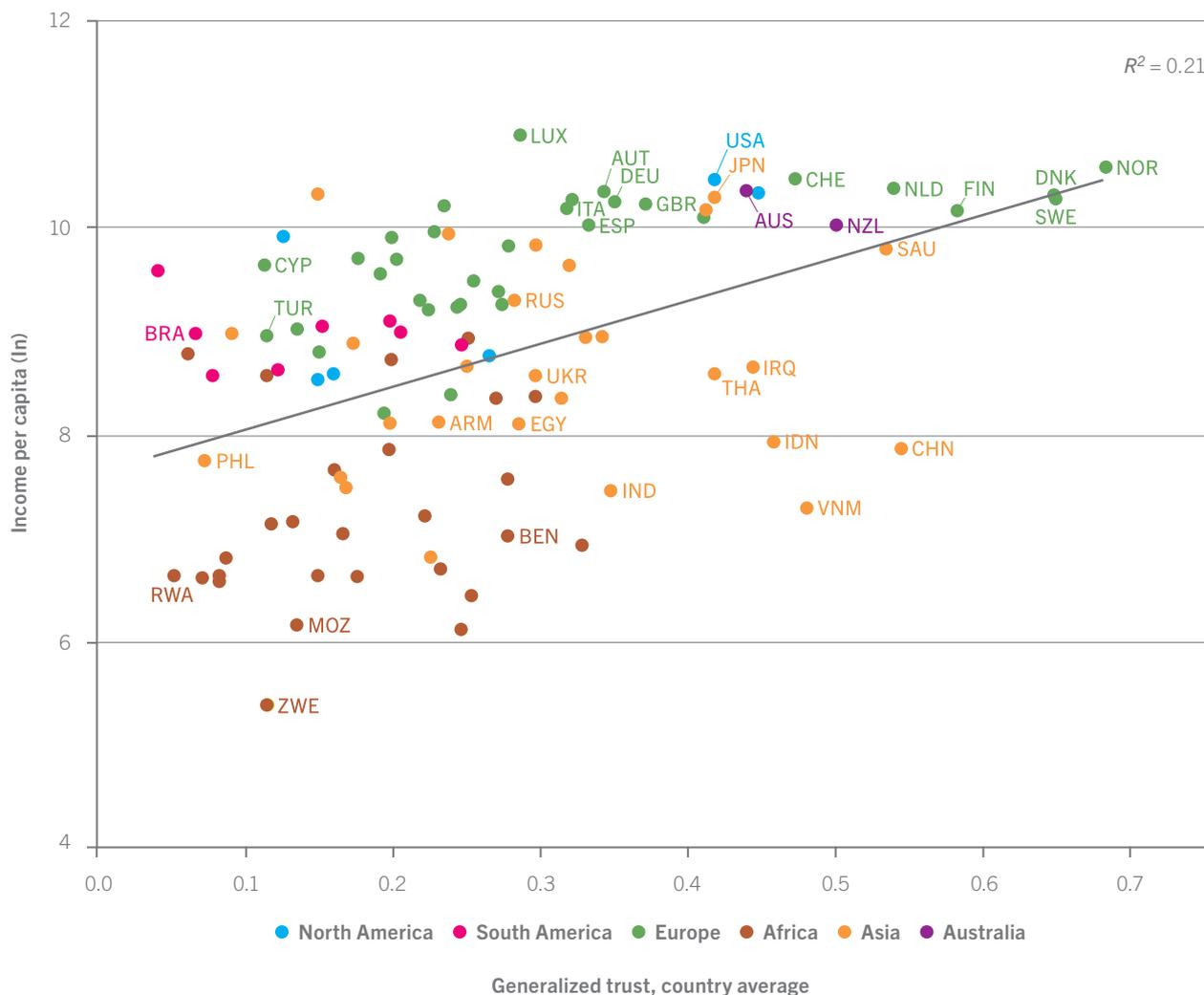
contracting apply within firms, between firms and between people, implying that cooperative national cultures are as important for a country's performance as corporate cultures are for a firm's performance.<sup>6,7</sup> The research on the relationship between national cultures and national success relates measures of regional and national trust – which can be taken as proxies for the actual level of cooperation and trustworthiness at the regional or national level – to national income data.

Those firms in which the employees perceive their top managers as trustworthy and ethical in their business practices show higher productivity and profits.

Figure 1 shows that there is a positive correlation between “generalized trust in strangers” at the country level and the countries' income per capita (measured in natural logarithms). This figure supports the view that countries that are able to establish institutional environments and norms that lead to a high level of cooperation and trustworthiness, and thus trust, flourish significantly better. This provides reason to believe that there is a positive relationship between the “cooperativeness” of companies' business cultures and their overall success.

Fig. 1 The relationship between trust and growth

Income per capita (1980 to 2009) plotted against average trust (1981 to 2008); N= 106 countries



**Note:** Figure 1 plots the average income per capita (ln) between 1980 and 2009 against the average trust between 1981 and 2008 for a sample of 106 countries. It illustrates the relationship between generalized trust at the national levels – which is a proxy for the general trustworthiness towards strangers in a population – and countries’ income per capita. Countries with higher levels of trust also display higher income levels.

Source: Algan and Cahuc 2013

# Cooperative cultures and public goods

In the previous examples of potential employee opportunism (e.g., in the e-mail example or the sales example from the pharmaceutical industry), there are incentives to engage in behaviors that are beneficial for the individual employee but detrimental to the firm's overall performance. These examples represent instances of the free-rider problem that arise in the context of a public good: individual employees enjoy the public good – for example, by benefitting from a firm's good performance – without contributing much to it because of their opportunistic behavior.

The public good aspect in corporate culture problems is most salient when it comes to a company's public reputation, which is perhaps its most valuable asset. Warren Buffet pointed this out in one of his biennial letters to the Berkshire Hathaway managers: “The top priority – trumping everything else, including profits – is that all of us continue to zealously guard Berkshire's reputation. We can't be perfect but we can try to be. As I've said in these memos for more than 25 years: We can afford to lose money – even a lot of money. But we can't afford to lose reputation – even a shred of reputation.” Thus, establishing and maintaining a good public reputation is perhaps the most important task of a cooperative corporate culture.

Why is a company's reputation a public good? It is so because every stakeholder of the company benefits from a good reputation but has little individual incentive to contribute to it. The employees as a whole benefit because if the firm produces high value, it has more leeway to pay higher salaries. Capital owners benefit because the firm's shares increase

in value. Sales personnel benefits from a good reputation because it is easier to sell the firm's products. HR managers benefit because they can recruit better employees. The firm can attract inputs at better terms of trade and secure financial capital (e.g., loans) at lower cost. Finally, quite simply, it is just nicer for every employee to work for a company with a good reputation. Nevertheless, because of the inevitable imperfections and incompleteness of employment contracts and financial reward systems mentioned earlier, employees often face individual incentives for behaviors that undermine the firm's reputation. Specifically, they can free ride on the firms' reputation and enjoy the benefits without the need to contribute, even if they undermine the reputation.

Ideally, a cooperative corporate culture successfully induces the firm's employees to contribute to firm-specific public goods despite the existence of pecuniary incentives to free ride. But how can we achieve this?

## Measuring cooperation with experimental games

Experimental games enable researchers to measure how much of their own payoff people are willing to sacrifice to provide benefits to their group. These games are typically played one-shot, with anonymous partners and with real monetary stakes. Experimental games usually take place in laboratories equipped with a large set of networked computers on which participants can be tested simultaneously in interactive settings.

There are different experimental games, such as coordination games or market games. To measure people's willingness to cooperate, researchers work with public goods games, which represent a generalization of the prisoners' dilemma game. In a public goods game, players receive tokens, which they can simultaneously invest in any proportion into a private or public project. Investment into the public project maximizes the aggregate earnings of the group; yet, each individual can gain more from investing into the private project. For example, if an individual in a group of five invests CHF 1 into the public project, then each of the five benefits CHF 0.4 from this investment (i.e., the group benefits CHF 2). In this case, the incentive structure of a public good prevails: each individual has a selfish incentive to freeride, but the group as a whole benefits from individual investments. Typically, players begin by investing half their tokens on average. However, many invest either all or none. When the game is repeated over time, with feedback on the other player's decisions at the end of each round, investments decline until only a small fraction (approx. 10%) of the players invest anything.

How can we get people to invest in public goods in spite of these effects? A large body of evidence shows that many people are willing to reward fair, cooperative behavior and to punish unfair, noncooperative behavior in public goods games. Indeed, when players in the public goods experiment can punish others, many players who invested in the public good punish



Laboratory for experimental and behavioral economics at the University of Zurich's Department of Economics.

the players who did not invest, even when this comes at a cost for them. This in turn encourages further investments, leading players closer to the efficient solution in which everyone invests.

### What are public goods?

Public goods are goods that are nonrivalrous and nonexcludable. That is, a public good is a product or service that one individual can consume without reducing its availability to another individual, and from which no one is excluded. Broadcasting services, public water supplies, street lighting for roads and motorways, or clean air in public space are examples for public goods.

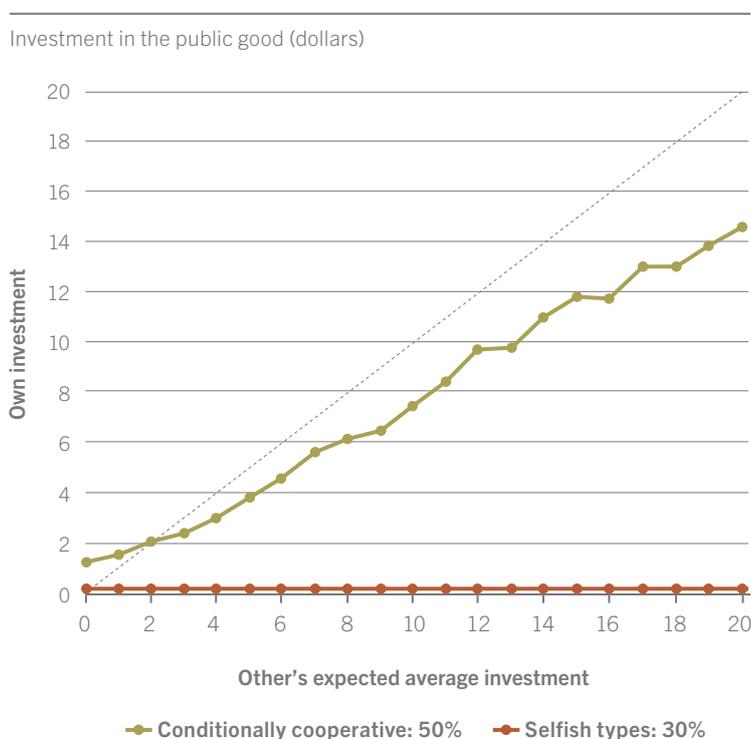
# Conditional voluntary cooperation comes into play

If all people act entirely selfishly and only aim to maximize their pecuniary returns, it would be impossible to prevent employees from free riding – unless there were explicit pecuniary reward and sanctioning systems in place. Yet, as argued above, these systems are inevitably incomplete and imperfect: Does this mean that we just have to live with the prevalence of free riding? Fortunately, there is a large body of both circumstantial and experimental evidence suggesting that a sizeable share of individuals is not entirely selfishly motivated. To be sure, this evidence does not say that these people are completely selfless, without a pinch of self-interest. Yet, evidence shows that they are willing to constrain their self-interest by contributing to public goods.

Figure 2 is based on the results of a public goods experiment in which four subjects were endowed with money that they could either keep for themselves or invest into a public good.<sup>8</sup> Every dollar invested into the public good led to a return of \$0.4 for the investor, and each of the other group members also benefitted \$0.4 from the investment. The group as a whole therefore earns \$1.6 per dollar invested, but the investing individual loses \$0.6 per dollar invested. This incentive structure captures the public good problem in a nutshell. The group as a whole would be better off if everyone invested their whole individual endowment in the public good, but individuals face strong free-riding incentives to keep the money for themselves.

Figure 2 shows how much individuals are *voluntarily* willing to invest into the public good, depending on what they believe that others in the group will contribute to the public good on average.

Fig. 2 Own investments in the public good as a function of others' investments



Note: The figure shows the relationship between contributions to the public good at the individual level and individuals' expectations about others' average cooperation.

Source: Fischbacher, Gaechter, and Fehr 2001

## Whether people cooperate or free ride also depends on the cost of cooperation.

These experiments have been replicated across the globe,<sup>9</sup> with a typical outcome: the vast majority of individuals (between 70 and 90%) belong to one of two large groups. On the one hand, there are those individuals who free ride completely, i.e., contribute nothing regardless of their expectations about others' average contribution; let us call them the "selfish type". On the other hand, there are individuals who substantially increase their own contribution to the public good if they believe that others will increase their contributions; we call them the "reciprocators" or "conditional cooperators". Notice that conditional cooperation is typically "imperfect", meaning that if others increase their average contribution by \$1, conditional cooperators increase theirs, on average, by less than \$1. In the example in Figure 2, there are more conditional cooperators (50%) than selfish types (30%), but this may change with the size of the financial disadvantage that an individual incurs from a contribution to the public good.<sup>1</sup> For example, a public goods experiment with a return of \$0.7 instead of \$0.4 would lead to higher and more frequent cooperation. In fact, when we use the label "reciprocator", "conditional cooperator" or "selfish type" below, we do not imply that a given individual always behaves in a conditionally cooperative, respectively selfish way: whether people cooperate or free ride also depends on the cost of cooperation (e.g., the \$0.6 an individual loses in our public goods experiment). However, this fact does not rule out systematic differences across individuals in their willingness to shoulder these costs, and it makes sense to classify them into two types for analytical

purposes – one type who is willing to bear relatively high costs ("conditional cooperators") and another type who is willing to bear only relatively low costs of cooperation ("selfish type").

<sup>1</sup>The remaining 20% show somewhat irregular patterns of behavior such as initially increasing and then decreasing their contributions as a function of beliefs about others' average cooperation.

# On leadership, selective hiring, and shifting expectations

The findings illustrated in Figure 2 have important implications. Not only is a sizeable proportion of people willing to cooperate, but we can also influence their behavior by shifting their expectations about other people's average cooperation. If expectations become more pessimistic, conditional cooperators will reduce their cooperation; if they become more optimistic, they will increase it. Conditional cooperators are willing to share the burden of contributing to a cooperative corporate culture, but only if others do so as well.

An immediate implication of these heterogeneous types – reciprocators and selfish ones – is that, all else being equal, a company would always prefer to employ a reciprocator rather than a selfish type. In other words, “character” is as important in hiring people as “skill”. Thus, investing resources in finding and selecting cooperative types must be part of the toolkit of a cooperative corporate culture. Moreover, a strong focus on financial incentives may be counterproductive because it may attract selfish types and discourage reciprocators to apply for a job.

Conditional cooperation also explains why leadership is so important: Leaders have a high visibility and set an example with their words and actions that influences the expectations about others' cooperation. If leaders fail to live up to the normative demands of a cooperative culture – for instance, by creating doubts about their willingness to go the extra mile, or by ignoring obvious misconduct – they cannot expect their employees to do better. This is also supported by experimental evidence<sup>10-12</sup> and the study mentioned above<sup>5</sup> that reports higher

financial performance in those companies where employees perceive their leaders to be trustworthy and ethical in their business practices.

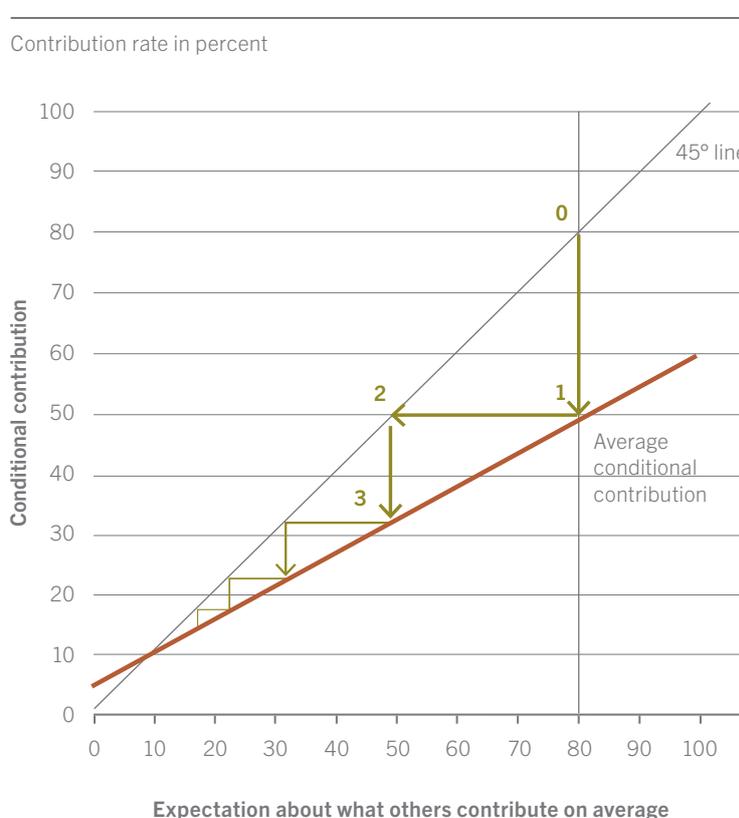
Leaders' overall approach to establishing and enforcing a cooperative culture is decisive. By making clear that violations from cooperative norms are undesirable and not tolerated, they can shift employees' expectations in a positive direction. In fact, measures to steer the selfish types towards more cooperation – be it through financial rewards, sanctions, or some other mechanism – will generally shift expectations about others' cooperation in a more positive direction. Thus, explicit incentives and sanctions can help achieve a cooperative culture. Due to the existence of conditional cooperators, an effective incentive system has a multiplicative effect on company performance. In addition to directly increasing peoples' contributions to the overall success of the company, it will also have indirect positive effects by rendering expectations about others' contributions more optimistic.

# The limits of voluntary cooperation

Figure 2 shows that conditional cooperation is on average below perfection – a rise in the expected cooperation level of others by \$1 induces individuals to raise their cooperation by less than \$1. This limitation is a robust empirical feature across many studies and has important implications: mere appeals for voluntary cooperation generally do not suffice for achieving a cooperative culture. In particular, high and stable levels of voluntary cooperation are difficult to achieve when a nonnegligible share of the population is of the selfish type.<sup>13, 14</sup>

Figure 3 illustrates these difficulties and shows the dynamic consequences of imperfect conditional cooperation. Suppose that there is an initial expectation that people will on average contribute 80% of their endowment to the public good. If all people were perfect conditional cooperators they would respond to this initial expectation by contributing 80% of their endowment (Point 0) but based on the population's average behavior, the average cooperation rate for this expectation will only be 50% of the endowment (Point 1). People are therefore likely to adjust their expectation downwards, perhaps to 50% (Point 2), but the average cooperation rate for this expectation will then be only about 30% of the endowment (Point 3), which then leads to a further decrease in expectation. The consequence of this dynamic process is that cooperation will eventually break down – a pattern that is indeed often observed empirically.

Fig. 3 The dynamic consequences of imperfect conditional cooperation



- 0 Perfect conditional cooperation, reflecting initial expectation about others' contribution
- 1 Initial conditional contribution based on initial expectation
- 2 Revised expectation about others' average contribution
- 3 Next period's conditional contribution based on the revised expectation

**Note:** Initially, individuals expect high average contribution rates, say 80% of the endowment. On average, this induces them to contribute 50%. Therefore, expectations are disappointed which leads to a downwards revision of expectations to say, 50% of the endowment. Yet, if individuals expect 50% they will in fact only contribute roughly 30%, causing a further downwards revision of expectations.

Source: Fehr and Fischbacher 2003

Fig. 4 **The decline in overall cooperation due to imperfect conditional cooperation**

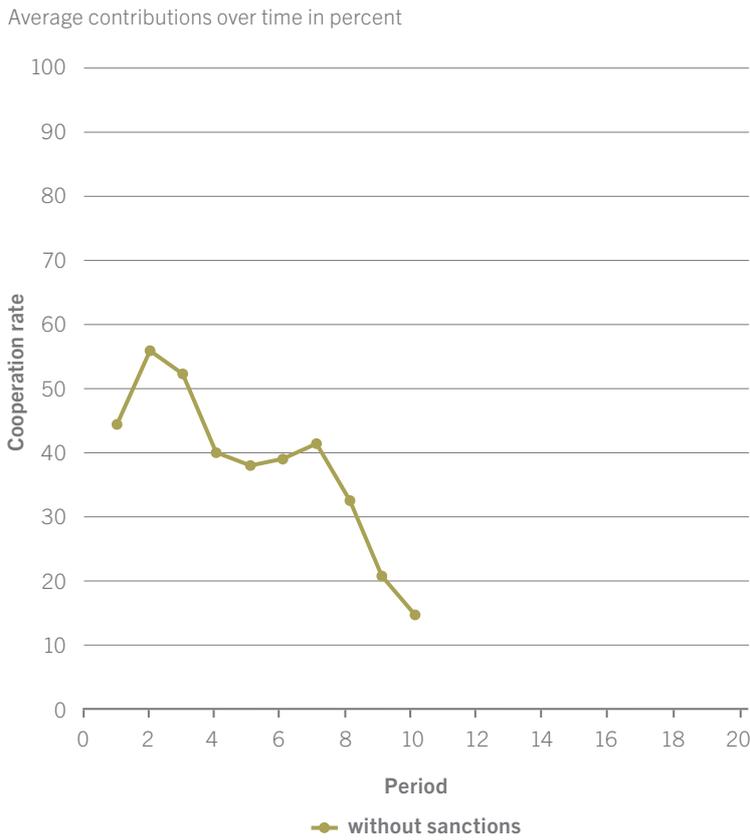


Figure 4 illustrates this and shows how overall cooperation drops because of imperfect voluntary cooperation. While initial cooperation is on average halfway between zero and 100 percent of the endowment, it eventually breaks down because there is no mechanism to stop the downward trend.

Source: Fehr and Gaechter 2000

# Is peer feedback the answer?

If voluntary cooperation alone is not enough to establish a cooperative culture – what tools and mechanisms are then left? Due to their inevitable imperfections, neither centralized monitoring nor sanctioning based on enforceable contracts are ways out of the dilemma. Indeed, the very necessity of voluntary cooperation arises precisely because of these imperfections.

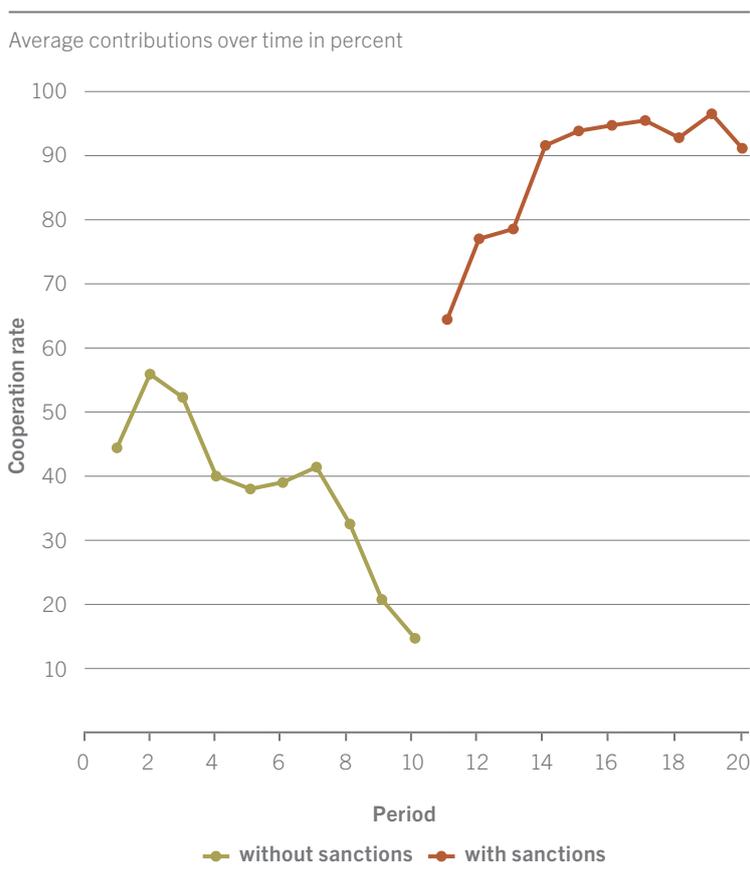
Selective hiring of very cooperative employees provides a possible solution for small firms. In fact, there is evidence<sup>15</sup> that the selective hiring of “highly cooperative types” into a public goods experiment leads to high and stable cooperation levels. In contrast, if subjects characterized by only a medium or low willingness to cooperate are selected, cooperation levels are lower and eventually cooperation unravels.

However, the strategy of selectively hiring cooperators also has its limitations: If job candidates know that their cooperativeness affects the hiring decision, they have every reason to hide their true characters and at least appear to be cooperative. Imperfections in discovering the true cooperativeness will probably always lead to a mixed population of reciprocators and selfish employees in a company. To make it even gloomier: Even if it were possible to discriminate between reciprocators and selfish types perfectly, given the large share of selfish types within the overall population, it is simply impossible for every firm to just employ reciprocators. In larger firms, in particular, there will inevitably be a heterogeneous mix of types. However, selective hiring can be a solution for small firms.

So, we are back on square one: If selective hiring alone provides no general solution, what remains? A considerable body of evidence suggests that peer monitoring and peer sanctioning can be a solution. If it is transparent that the public good benefits everyone in the group, individual contributions to the public good tend to automatically become the “the right thing” to do. In other words, people consider it normatively appropriate for everyone to contribute to the public good. However, just because it is normatively correct to contribute does not make people contribute automatically. Specifically, free riders must receive feedback, reminding them that they, too, should contribute. This feedback can vary from an innocuous hint to a sharp social sanction.

In practice, peer sanctions can be very mild – sometimes, they are not even considered as a sanction. This is the case when a group member, for instance an employee, reminds a colleague of the normative duties with a friendly “By the way, it would be very nice of you if you did ...”. Peer sanctions can take on many other forms, from a simple raised eyebrow to a smirk, from ridiculing to ostracism, from a friendly face-to-face conversation over a general discussion without finger pointing to a public statement that singles out individuals as perpetrators. Some of these sanctions are clearly costly or risky for those who raise the concern or initiate the sanction, and some may even be destructive for a team. This raises the question whether enough people are willing to bear these costs of providing feedback, and what the appropriate and legitimate forms of feedback are. Clearly, peer feedback in a company context should be constructive and

Fig. 5 Voluntary feedback and sanctioning overcomes the limits of voluntary cooperation



Source: Fehr and Gaechter 2000

socially compatible with a cooperative culture; indeed, allowing for positive and negative feedback has better effects than just focusing on negative feedback, e.g., in form of sanctions.<sup>16</sup> Perhaps one of the most important requirements is that, in every part of the organization, peer feedback is a widely known, approved and accepted approach, acknowledged to improve the overall functioning and performance of the organization.

There is a large body of evidence<sup>1, 17</sup> showing that a significant share of the people is willing to bear the cost of sanctioning free riders if there is a transparent normative case against free riding. Take, for example, the subjects in Figure 4, whose cooperation just broke down: they are given an opportunity to provide feedback to their peers after having seen their peers' contributions to the public good. In the specific experiment, they could only give negative feedback by assigning "disapproval points" to their peers. Assigning a disapproval point implied a cost of \$1 for the feedback provider, and a cost of roughly \$3 for the criticized peer. With these monetized sanctions, providing feedback becomes unambiguously costly for both parties. It allows us to study the behavioral implications of costly sanctioning: If somebody assigns points to free riders, we know that he or she is willing to pay to sanction them. Of course, other types of feedback and sanctions will apply in a company context.

What effect did peer-sanctioning opportunities have on cooperation? Remember that cooperation unraveled almost completely in our example of Figure 4, when no sanctioning opportunity was available. For convenience, the first graph of Figure 5 again illustrates this breakdown of cooperation, while the second graph shows that cooperation immediately increases up to a level of nearly 100% after the introduction of the peer-sanctioning opportunity. The same individuals who cannot prevent a cooperation

In summary, the moral message of the sanction is clear:  
“Thou shalt not free ride.”

breakdown where feedback opportunities are missing, can achieve nearly full cooperation when feedback is possible!

This pattern suggests the following lesson: When the group benefits of a public good are transparent, contributions to the public good become the normatively appropriate behavior, which legitimizes the sanctioning of the free riders. In the experiment mentioned above, those who free rode the most received the harshest sanctions, while mild free riders were typically only sanctioned mildly. In summary, the moral message of the sanction is clear: “Thou shalt not free ride.” In fact, subjects who were sanctioned typically raise their cooperation levels immediately, and recent evidence shows that cooperatively motivated sanctions even increase norm obedience in situations where the individual cannot be observed.<sup>18</sup>

# Case study: Cooperation between profit centers

How can we use the previous insights on the determinants of a cooperative culture to solve cooperation problems in practice? To illustrate this, we consider a real case from the media industry. One of the largest media corporations in a European country had bought more than 100 smaller and medium-sized firms over a period of 15 years. The new owner of these companies reorganized them into roughly 30 independent profit centers, and gave them the freedom to decide about production and sale of media content, the choice of technology, etc. This decentralization helped to keep decision-making processes at the profit center level quick and flexible, and it provided good incentives for effectively managing the centers.

However, the division into many profit centers had the major disadvantage that this media corporation could not play the big player card. As it is generally known, the largest units in the media market are typically able to attract much more attention and lure more customers for a longer time on their websites, than smaller units are. Thus, many more people see an ad on the website and this attention premium makes it in turn very attractive for advertising companies to buy more ads at even higher prices. In principle, the executive management of the media corporation seemed to have an easy technical solution for this problem: Request that individual profit centers link their websites to generate an overall web-traffic system. Yet, this solution has a drawback: Individual profit centers have little reason to generate web-traffic for their perceived competitors, even if they are part of the same corporation.

This is a classic public goods problem. Overall revenues are maximized by link-

ing the profit centers' websites, but each individual center has an incentive to free ride. The management of the media corporation recognized that simply imposing central authority did not work. Specifically, the centers had identified ways to formally implement a link – and thus obey with the center's request – but the links were hidden and did not generate the desired synergies among the centers in terms of overall web traffic. What was needed was the voluntary, proactive, cooperation of the centers, and not just their perfunctory cooperation.

The first step in solving this problem was to make the profit center managers aware of the large unexploited synergies and to show them the mutual gains from cooperation. This is a precondition for mobilizing the power of social norms to change behavior. In a next step, the center managers worked out a joint agreement where they defined a new set of very specific normatively appropriate behaviors to solve the cooperation problem, and each manager individually signed this agreement. Knowledge sharing between the profit centers was one of the desirable behaviors listed in the agreement: "We share our know-how between the profit centers. We appreciate that we can ask other profit center leaders for their expertise. We approach other profit center leaders if we believe that our knowledge and expertise adds value to them."

The integration of norm enforcement into the list of normatively appropriate behaviors was also a key part of the joint agreement. The importance of this component cannot be overstated, as it represents the normative basis, in fact the obligation, to provide feedback in response to norm violations. For example,

the joint agreement stated, “We will give direct feedback to those employees who do not comply”. The agreement also defined escalation stages in case of persistent noncompliance: “If the respective employees do not change their behavior, we will escalate the issue to the compliance committee.” This normative obligation to provide feedback represents a clear and unambiguous invitation – and authorization – to provide feedback.

Two additional measures completed the construction and implementation of a new set of behavioral norms in our example. First, an information campaign informed all employees of the new norms. Second, the firm changed their financial incentives to weaken the pecuniary free-rider problem at the profit center level: Profit center managers’ compensation was partly tied to the overall performance of the media corporation. While this incentive change did not remove the free rider problem, it was an additional important message to strengthen the focus on synergistic norm-based cooperation.

This case study illustrates typical aspects of culture problems. The beauty of the solution is that it includes all ingredients that this Public Paper outlined to be important for achieving a cooperative corporate culture:

First, people were made aware of the mutual gains from cooperation and the chosen approach ensured that the individual profit center would indeed have tangible benefits from better overall cooperation. This first step provides the basis for a change in the behavioral norms.

Second, by committing individual profit centers and individual managers via a joint agreement to a set of cooperative behaviors, it generated a general expectation of increased cooperation. This alone causes already higher voluntary cooperation by itself.

Third, when enforcing cooperative behaviors via feedback becomes a social norm, this fosters the general belief in everyone’s cooperation and establishes a credible peer-sanctioning system. As an important aspect of this system of feedback and sanctioning rules, providing feedback is entirely motivated with a normatively attractive goal, i.e., increasing the overall corporate performance.

Last but not least, the psychological costs of providing feedback decrease and the costs of persistent noncompliance increase with a clear escalation path, thus raising the incentive to follow the feedback rules.

The normative obligation to provide feedback represents a clear invitation – and authorization – to do so.

## Improving decisions with nudging

The implications of behavioral economics are far-reaching, and its ideas – such as the concept of nudge – have been applied to various domains, including personal and public finance, health, energy, public choice, and marketing. Nudge is a concept which argues that indirect suggestions and hints (e.g., reminders, measures that merely shift people’s attention) can influence the motives, incentives, and decision making of individuals – sometimes more effectively than direct instruction, legislation, or enforcement. Nudge is not about punishing people if they do not act in a certain way. It is about making it easier for them to make a certain decision. For instance, putting the fruit at eye level counts as a nudge; banning junk food does not.



All over the world, public and private organizations are showing keen interest in “nudges”. Indeed, using nudge as policy measure is proving increasingly popular. The former US president Barack Obama recruited behavioral economist Cass Sunstein as an adviser and exhorted US government departments to adopt behavioral economic concepts such as nudge. In 2010 the UK Government set up a Behavioural Insights Team, commonly dubbed a “nudge unit”, to develop policies.

Nudge policy has worked in many different areas, such as organ donation. As in the UK, several countries have been rethinking their policy regulation on organ donation recently. This is due to the fact that in countries where people are automatically enrolled in organ donation schemes and have to actually opt out, like in Spain or Austria, only very few people do so – providing a far larger pool of organ donors. Another example is littering. The city of Lucerne for instance tried to encourage its citizens to properly dispose of their trash (see lower picture). The city launched its “Lucerne shines” program in 2011, which rolled out mazes, hopscotch boxes, and three point lines to make the act of trash disposal more fun. The city was awarded the “green can award” for the program.



Photo by clockworx/tiefgang design

# On the nature of corporate culture problems

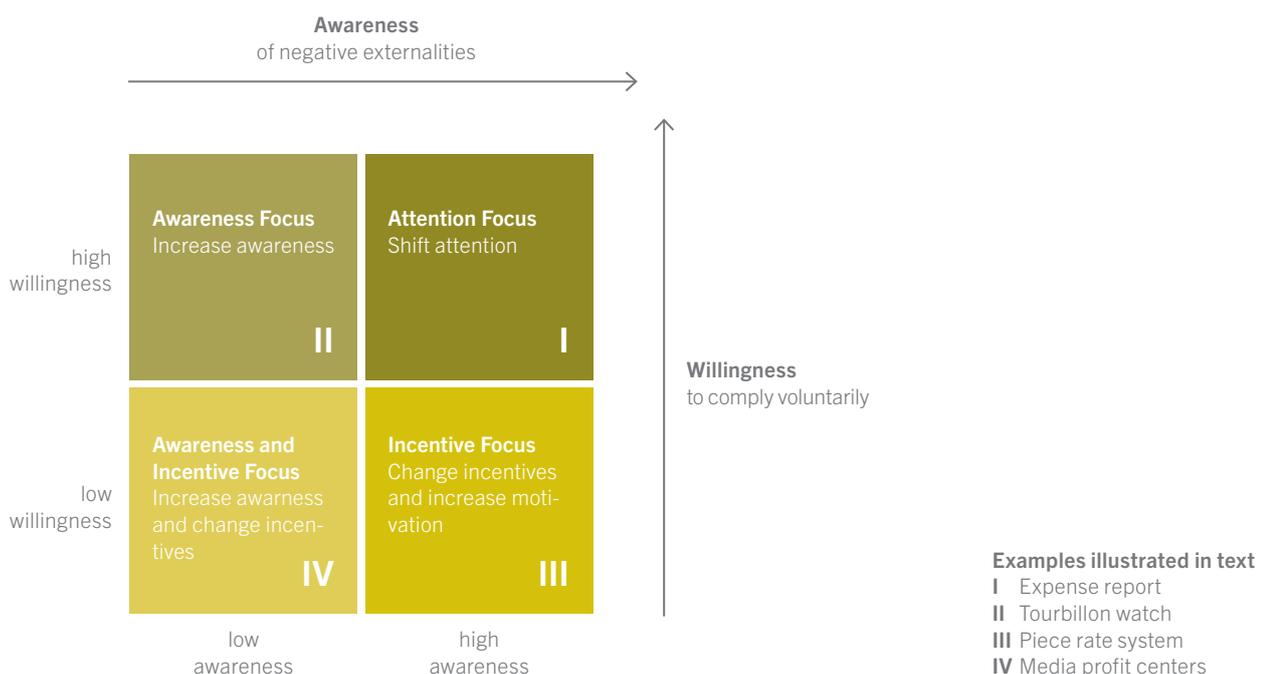
Corporate cultures are different, and so are corporate culture problems. Some problems are easily solved with simple nudges and awareness campaigns, while others require implementing a new set of strong social norms with associated enforcement rules. Looking at a large variety of culture problems and appropriate measures, the following classification (Figure 6) has proven to be useful. Problems are classified along two dimensions: the employees' average willingness to comply voluntarily with the cooperative social norms, and the employees' awareness of the negative effects that

result from non-compliance. We simply distinguish only between "low" and "high" values on both axes.

The cooperation problem among profit centers described above is located in the lower left corner of this matrix (Box IV): It required changing the awareness of the negative effects of noncooperation as well as changing the social (i.e., norm-driven) and financial incentives.

Box I in the upper right corner reflects a situation where the negative consequences of noncompliance on the com-

Fig. 6 Matrix to assess and address corporate culture problems



pany are clear and the employees are, in principle, quite willing to comply voluntarily: compliance requires only little extra effort, but at the same time, small distractions keep them from obeying the rules. In these cases, simple attention-shifting nudges (e.g., reminders) may move the employee in the right direction. An example for this cultural problem is sloppiness in filling out expense reports and separating private from company expenses, typically a tedious task. Simple measures like confirming at the beginning of the expense report to correctly report expenses (e.g., “I declare that I report my expenses truthfully and that I do not claim incidental private expenses”) or being made aware that “98% of all employees report their expenses truthfully” may effectively reduce sloppy reporting.

In box II (upper left corner), we face the problem that employees are quite willing to comply voluntarily, yet, they are not aware of negative externalities. Let us take a manufacturing line where employees are highly willing to produce a top-notch product, e.g., tourbillon watch, yet management has not yet informed them that client needs have changed and the product no longer meets their requirements. Here, a shift in awareness will help to improve the situation, ideally combined with stronger cooperation with the customer relations team. More generally, the interactions between complementary – noncompeting – units of a company are often characterized by asymmetric information and a lack of awareness of the needs of the other units; this is detrimental for the overall performance of the company.

In box III (lower right corner) employees are aware that their behavior hurts the company, but they have strong incentives to do so. In this case the company needs to change employees’ motivation with appropriate measures. An example for such a problem relates to a system where piece rates incentivize employees’ perfor-

mance. It is a common approach for firms to set performance goals for their employees and pay a premium if they reach the goal. However, the firm has an incentive to adjust the goal if too many employees attain it. In a piece rate system, for example, the piece rate is determined based on how many pieces a worker can typically produce, say, in a day or a month. The piece rate is initially set such that the workers earn the average-going market wage. However, if the initial assumption about what workers can produce in a given time is too low because workers learn and improve over time, workers earn more than the market wage, and the firm has a strong incentive to adjust the piece rate. To avoid such adjustments, however, workers often reduce their effort and disguise the fact that they could produce more. This kind of work ethic can also develop into a strong social norm – obviously, a counterproductive norm that hurts the firm’s performance, and where workers are well aware that their shirking has this negative effect on the firm. To solve this problem, the firm must credibly commit to keep piece rates constant over a mutually agreed longer time as to remove the workers’ incentive to withhold effort. This measure is tantamount to a movement along the vertical axis in Figure 6.

# Summary

Contractual incompleteness, the imperfections of centralized monitoring, and limits to contract enforcement naturally constrain firms' ability to regulate and direct their employees' behavior. This causes severe free-rider problems, which cooperative corporate cultures can overcome by defining and implementing social norms geared towards increasing the company's overall performance. A large share of the people is typically willing to follow prosocial norms at least partially if they believe that other people and, in particular the top leaders, will also comply. An important ingredient, perhaps the most important one, to legitimize cooperative norms is that they transparently increase the firm's overall value and generate long-run benefits for the involved parties.

As a firm's workforce is typically composed of people with different propensities for voluntary cooperation, it is inevitable that some of them will free ride on others' efforts if sanctions do not enforce rules and norms. The failure to comply with norms has the tendency to spread if appropriate measures do not constrain it. However, forces similar to those that lead to contractual incompleteness and imperfect monitoring also limit the centralized enforcement of norms. Peer feedback and peer sanctioning are, therefore, required for implementing and enforcing a cooperative culture. The optimal conditions for the effectiveness of peer feedback exist when it becomes an integral part of a company's corporate culture by making it a social norm and when all involved parties recognize that peer feedback increases the firm's overall performance and all stakeholders benefit from it. Classifying corporate culture problems along the two dimensions "willingness to cooperate" and "awareness of

negative externalities" has proven to be useful for determining the appropriate set of measures for solving these problems. Depending on the problem, the measures are in the areas of "changing awareness", "changing incentives and motivation" or both.

A final important lesson is that the mere proclamation of abstract values does not suffice for achieving a cooperative culture. These values need to be translated into concrete behavioral rules on the "shop floor" that are widely shared and enforced by top management and the employees themselves. To engineer compliance, the behavioral rules must be clear and simple. Further, they must transparently contribute to a firm-specific public good, such that employees can agree with them – because otherwise they will not enforce them.

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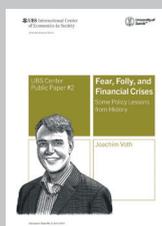
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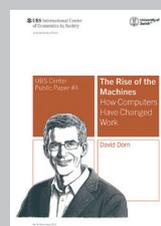
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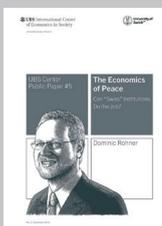
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