Available online at www.sciencedirect.com

ScienceDirect

Current Opinion in Psychology

Review

Persuasive communication, financial incentives, and social norms: Interactions and effects on behaviors

Maria Knight Lapinski[1], John M. Kerr[2], Hubert W. Miller[1], Moonsun Jeon[1] and Kayla Tracey[1]

Abstract

Social norms and financial incentives are both known to shape the decisions people make about prosocial actions. This paper reviews the financial incentives in normative systems (FINS) model, which integrates theories of social norms from communication, social psychology, and behavioral economics to predict relationships among incentives, norms, and behaviors. It addresses how incentives can affect norms and how they change the effects of norms on behaviors. The model shows how strategic communication (framing) of social norms and incentives can shape the way people respond to incentives, minimizing unwanted outcomes and even enhancing the effectiveness of behavioral incentive payments. These insights can guide hypothesis testing and application to real-world use of incentives for behavior change.

Addresses

[1] Department of Communication, Michigan State University, East Lansing, MI 48824, USA

[2] Department of Community Sustainability, Michigan State University, East Lansing, MI 48824, USA

Corresponding author: Lapinski, Maria K. (lapinsk3@msu.edu)Email address: jkerr@msu.edu (J.M. Kerr), millerhu@msu.edu (H.W. Miller), jeonmoo1@msu.edu (M. Jeon), traceyk1@msu.edu (K. Tracey)

Keywords

Social norms, Financial incentives.

Introduction

Communication plays a central role in forming and shaping social norms. Fundamentally, people learn about what are common and approved behaviors through observing the social environment and through explicit and implicit messages shared through mediated and interpersonal communication. Communication of social norms can range from strategic social norms campaigns [1] to a subtle eye-roll designed to rein-in deviant behaviors. The financial incentives in normative systems (FINS) model [2,3] is an integration of theories of social norms from communication, social psychology [4,5], and behavioral economics [6], designed to explain and predict the relationships among financial incentives, social norms, and behaviors. Conceptualizing the *evolution of normative systems through communication*, the FINS model focuses on how social systems and individual people adapt and change over time in the presence of financial incentives. It centers on two key questions: 1) Does the introduction of financial incentives for a behavior have the power to form, change, reinforce, or undermine social norms? 2) How can strategic communication (framing) of social norms and financial incentives shape the way people respond to incentives?

In this paper, we introduce the FINS model and recent research related to it. We then describe predictions that can be derived from the model which involve the careful framing of both social norms and financial incentives as a method for improving their effectiveness in the long term.

Incentives and social norms

Programs have used financial incentives to solve social problems as wide ranging as uptake of healthy behaviors [7,8], getting vaccinated [9], getting children into schools [10], and protecting ecosystems [11,12]. The logic of using incentives in these cases is that paying people to enact a behavior will make it more attractive by offsetting any direct or indirect costs of the behavior. Often, paying people does indeed increase the number of people who engage in the behavior. However, financial incentives have far-reaching impacts on social systems when introduced into contexts with existing norms, attitudes, behaviors, and group dynamics. These things both shape and are shaped by responses to financial incentives. The combinations of incentives, social norms, and the ways they are communicated can have both positive and negative outcomes for a social system over time.

Current Opinion in Psychology 2024, **59:**101851

This review comes from a themed issue on Norm Change (2024)

Edited by Cristina Bicchieri, Michele Gelfand, and Giulia Andrighetto

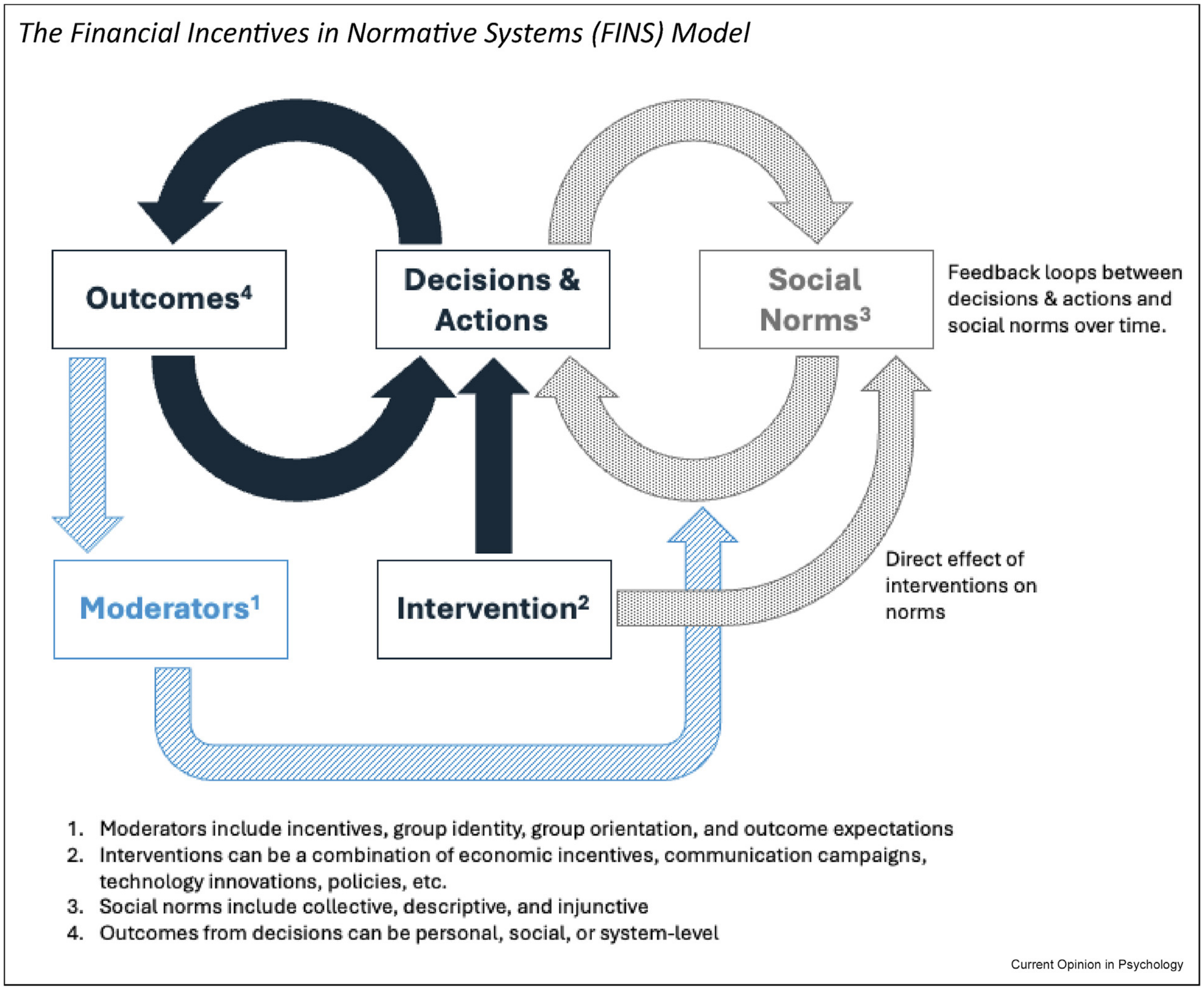
For complete overview about the section, refer Norm Change (2024)

Available online 29 July 2024

https://doi.org/10.1016/j.copsyc.2024.101851

Partial support was provided to Lapinski & Kerr by the USDA National Institute of Food and Agriculture, Hatch project numbers 1002327, 1018574, & MICL02244.

Figure 1



The financial incentives in normative systems (FINS) model.

The FINS model [2,3] is a broad conceptual framework (Figure 1) from which hypotheses can be derived about the independent and combined relationships among norms, incentives, and factors that moderate their effects on behaviors. It shows that financial incentives can have a direct effect on a person's decisions and actions and associated target outcomes, which can then shape subsequent decisions and actions. Incentives can also have indirect effects by shaping descriptive and injunctive norms, which further affect decisions and actions. The FINS model predicts that changes to the normative system occur because of financial incentives and that these changes may persist even after an incentive program has ended.

Beyond the direct effects of incentives on actions, the FINS model allows for predictions about three issues which are the foci of this paper: 1) the effects of financial incentives on social norms, which in turn can influence behavior; 2) the ways in which social norms and incentives can work together to shape decisions and actions; and 3) how both incentives and social norms can be framed through carefully designed communication to increase the likelihood of positive rather than negative outcomes. It centers on the role of both mass and interpersonal communication in the dissemination and amplification of normative information.

The effects of incentives on social norms (norms as mediator)

Motivation crowding is a term from behavioral economics describing when a financial incentive associated with an action or behavior influences a person's other sources of motivation for that action or behavior [13].

This literature stems from research showing that extrinsic rewards (especially financial incentives) could displace intrinsic motivation to perform a task or engage in a behavior [14]. Motivation crowding out means that a financial incentive undermines other sources of motivation; crowding in means that it enhances them. Whereas the causal factors behind motivation crowding remain poorly understood, Bowles and Polánia-Reyes [6] suggest, among other things, that financial incentives can change social norms around a behavior or action. The FINS suggests this could happen for several reasons.

First, collective and perceived social norms can mediate the incentive-behavior relationship. The introduction of incentives for a behavior influences changes in social norms by changing the actual prevalence of the behavior in the system (i.e., the collective norm), and ultimately change normative perceptions. Specifically, increasing the actual prevalence of the behavior in the system by paying people to enact the behavior may change both descriptive and injunctive normative perceptions [15]. To the extent that people are aware of increased behavioral prevalence, either through direct observation or communication, perceptions of the prevailing descriptive norm will be influenced [16]. Likewise, perceived injunctive norms can shift if people believe that payment for a behavior is being undertaken because the behavior is important to do. In either case, perceived norms may or may not correspond precisely to the actual norm. For example, a financial incentive may change the actual prevalence of a behavior, but perceptions could still be either an overestimate or an underestimate of behavioral prevalence [17].[1]

An incentive payment that induces prosocial behavior could contribute to a descriptive norm of undertaking that behavior, but if people know that the behavior is undertaken only for payment, an injunctive norm could develop that the behavior is not inherently worth doing or important and that people are only doing it for the payment. That is, an incentive can impact descriptive norms and injunctive norms in opposite ways, eroding the power of descriptive norms to influence behavior. On the other hand, offering a financial incentive for a behavior could help signal its importance in a social system [15]. This could conceivably enhance the injunctive norm in favor of the behavior and thus the payment would have consistent effects on both descriptive and injunctive norms. In short, the FINS model predicts that incentives can cause collective norms to emerge and that perceived descriptive and injunctive norms will change over time in response to incentives. This effect will be dependent on the presence of a financial incentive for behavior, but the magnitude and direction of that effect depends, at least in part, on the social context. This suggests that understanding the social context in which an incentive program is placed is a necessary step to explain and predict its effects.

Elements of the social context that should be important for the ways in which incentives affect norms over time are complex and just now being understood. For example, when an incentive payment occurs in a system where people receiving a cash payment for behavior have a great need for the money, such as in low socioeconomic status (SES) communities, the effect of the incentive on perceived prevalence (descriptive norms) is likely to be positive and strong.[2] Likewise, the effect of the incentives on perceived injunctive norms should be negative and strong. That is, people in the system will assume increasing prevalence of the behavior because of a need for the money (that is, most people in the system believe the people receiving the payment would respond to the payments by up-taking the behavior) and, people will attribute the uptake of the behavior to the receipt of money rather than a belief that the behavior is important or the right thing to do. Alternatively, in a system where people have strong values in favor of a behavior and a payment occurs for the behavior as in Kerr et al. [15], others in the system may assume the incentive will not motivate the behavior, making the effect of the incentive on perceived descriptive norms weak. But, the presence of the payment may still signal importance of the behavior and strongly impact perceived injunctive norms. Once the incentive is removed, however, the prevalence of the behavior is likely to be reduced and norms in favor of the behavior could also decline.

In a context-free public goods experiment, Lapinski et al. [16] used the FINS model as the basis for hypotheses about the effects of temporary incentives and social norms on behaviors over time. The study found that both financial incentives and measured perceived descriptive norms (i.e., people's perceptions of the prevalence of a behavior; PDN) contributed to increased contributions to a public good that benefitted the overall group as opposed to private goods that benefited people only individually. Over the course of the experiment, however, the financial incentive weakened the effect of perceived descriptive norms on contributions to the public good, and the weakening effect was present even after the incentive ended. In sum, Lapinski et al. found that (1) introducing and then removing a financial incentive led to an overall decline in contributions to the public good compared to a group that never received incentives; (2) over the course of

[1] Communication campaigns are routinely used for attempts at normative restructuring to correct normative misperceptions. See Shulman et al. [18] and Foxcroft et al. [19] for reviews.

[2] Incentive programs often off-set costs of behaviors which low SES people do out of necessity. For example, cutting and selling trees, sending children to work rather than school, working for money rather than taking their family to the health clinic, etc.

the experiment, payments initially increased the collective norm and changed the perceived descriptive normative perceptions in concert, (3) perceived descriptive norms and their effects declined with the removal of the incentive.

Incentives change the effects of norms on behaviors (incentives as moderator)

The FINS model has implications for how social norms and financial incentives can work together to shape decisions and actions. That is, the model predicts the moderating effect of incentives and other factors on the social norm-behavior relationship. Research is clear that the effects of social norms are typically contingent on other social and psychological factors [20]. Indeed, the theory of normative social behavior (TNSB) specifies these moderators [5] and the revised TNSB identifies additional moderators [20]. Several of these moderators of the norm-behavior relationship are reflected in the FINS model – including outcome expectations, group identification, and group orientation among others [21] – as well as the possibility that unmitigated incentives may decrease the effects of social norms on behaviors. In short, when a behavior is highly prevalent and approved, an incentive may increase the likelihood of enacting a behavior for those who are being incentivized, but it may undermine social norms [21]. Specifically, when we believe many others are doing a behavior (high descriptive norms) and at the same time, see that people are being paid to do that behavior, it is likely to reduce the power of PDN on behaviors because of the assumption that the behavior of others is attributable to the payment. Likewise, the effects of perceived injunctive norms on behaviors will be reduced by the presence of a payment because people in the social system will assume that the payment is shaping peoples' decisions to act rather than attitudes toward the behavior. Over time, the social norms that existed prior to the payment will be eroded and unlikely to return to pre-incentive level when the payment is removed. These predictions are made without considering the possible mitigating effects of framing. That is, the FINS predicts both an incentive and normative information can be carefully designed and communicated to people in ways to promote pro-social outcomes once the incentive is removed.

Framing incentives and appeals to social norms for influencing behaviors

Social norms and financial incentives for behavior change have both intended and unintended, sometimes perverse, outcomes [22–24]. This is because how people understand both incentives and norms is shaped, in part, by the ways in which they are provided information about incentives and norms and the elements of that information to which people attend. This issue is fairly well understood for social norms appeals without incentives [1] but less clear for the framing of incentives. The FINS model predicts that carefully designing incentive systems and providing carefully framed information about the nature of incentives along with appealing to injunctive and descriptive social norms can increase the likelihood of positive rather than negative outcomes. This is because careful framing of incentives and norms can influence how people understand financial incentives [25], the source and purpose of the incentive [15], and existing social norms in favor of the behavior [1].

Incentive framing

Generally, framing refers to "the process by which people develop a particular conceptualization of an issue or reorient their thinking about an issue" [26]; pp. 104. Frames are shaped through communication about an issue. Incentive framing is conceptualized in the FINS model as any verbal or nonverbal content or information provided to the people who are receiving a financial incentive that addresses the nature of that incentive (i.e., size, type, source, conditions), the processes by which the incentive was designed and implemented (i.e., community participation in decision-making, source of the money), or the people who are adopting the incentive (e.g., social norms messages about the incentive itself).[3] Incentives are framed primarily through strategic communication (rather than interpersonal or intra- or inter-group communication) by incentive designers with incentive recipients as the intended audience.

Kerr et al. [15] tested framed incentives designed to promote a sense of autonomy among community members. Based on the FINS model, formative data and consideration of the local cultural context, hypothetical incentives for patrols against illegal wildlife trapping were described in terms designed to validate local beliefs about sacred lands and autonomy to control what happens on those lands. In a field experiment with Tibetan pastoralists in Qinghai, China, a temporary payment framed in this way strengthened the already strong injunctive norms in favor of patrolling against illegal wildlife trapping, and led to an increased prevalence of patrolling, even after the incentive ended [15]. The ways in which an incentive is communicated to people and how people communicate about the incentive will shape peoples' response to that incentive over time. Strategic communication that resonates with the values and needs of the community in which the incentive is introduced will increase the probability that the incentive will be positively evaluated and ultimately increase its positive impact and reduce the likelihood of unintended or negative consequences. It may also increase positive

[3] We distinguish incentive framing from other communication elements of an intervention unrelated to the incentive, such as messages about the likely non-financial benefits of enacting the behavior and normative information about other people's perceptions of non-financial benefits.

interpersonal communication about the incentive and shape attitudes and ultimately normative perceptions.

Social norms appeals

Social norms appeals can be used to bring norms into focus or make them more accessible [4], correct misinformation about norms [19], demonstrate that new norms are trending [27,28], or indicate that particular people in a system have adopted a behavior with good outcomes [29,30]. Recent research [1] demonstrated that appeals to norms can influence behaviors and that messages highlighting injunctive norms are particularly powerful. Appeals to social norms may be especially useful when there is clear information that what is normative is misunderstood in the population (e.g., over- or under-estimation of prevalence or approval of a particular behavior), there is a group element to the behavior (e.g., protecting a watershed), the behavior happens when others might observe the action (e.g., sending children to school), and when the benefits of the behavior can be made very clear to people (termed outcome expectations in the norms literature [20,31]). Social norms appeals can influence perceptions of both self-efficacy [32] and collective efficacy [33], which then shape behaviors. Because culture shapes what people see as normative, some studies have shown that cultural dynamics shape how people respond to normative information [3].

Combining social norms appeals and incentives

Information about social norms has been tested in combination with financial incentives to examine their combined effects on behaviors in energy conservation, healthy eating, environmental protection, and consumer motivation. For example, financial incentives combined with messages about descriptive social norms were more effective than incentives alone or social norms messages alone in promoting desired actions in both a study of consumer motivation [34] and a study of natural resource management [35]. Messages combined with incentives have been shown to influence energy conservation [36,37]. The combined effects of norms and incentives may be short-rather than long-term. Incentives combined with normative information had short-term effects on healthier food choices relative to a control, but those effects disappeared over time [38].

In studies which combine social norms appeals and incentives most often focus on descriptive norms and the *nature* of the information provided to people about either the incentives or the norms is not carefully explained; the FINS calls for greater attention to this issue and additional consideration to appeals to injunctive norms. A financial incentive could be coupled with an appeal to injunctive norms, addressing the *attitudes* of others about enrolling in an incentive scheme, for example whether most people in our community think accepting the incentive and engaging in the associated behavior is the right thing to do or is important for our future.[4] To our knowledge, few studies have studied whether an injunctive norms message about a financial incentive program might be powerful. The FINS model suggests that it could be.

Conclusions

By combining insights from communication science, social psychology, and behavioral economics regarding the influence of social norms on decision-making, the FINS model presents a framework for understanding the relationships among social norms, financial incentives, and the strategic communication of both. Through identifying ways in which social norms interact with incentives and other variables in affecting decisions, the model can guide hypothesis testing and application to real-world use of incentives for behavior change. In particular, the FINS provides the basis for the mediating and moderating relationships among incentives and social norms [16]. It describes the ways in which both social norms and incentives can be carefully communicated to stakeholders in ways to increase the likelihood that the behavior being promoted will be enacted and unintended outcomes are reduced [15]. The FINS model specifically considers time in its conceptualization with the understanding that social norms evolve over time and incentives are likely to be introduced, then removed, leaving lasting impacts. The FINS is based on a formative data-driven approach to both message and incentive design; with community input on both as the pinnacle of design and as the best way to consider social context. Although some of the predictions of the FINS have been tested, the model was designed to be heuristic; testing and additional refinement of it can help promote understanding of the ways in which social norms, incentives, and communication shape peoples' decisions.

CRediT authorship contribution statement

Maria K. Lapinski: Writing – original draft. **John M. Kerr:** Writing – review & editing. **Hubert W. Miller:** Writing – review & editing. **Moonsun Jeon:** Writing – review & editing. **Kayla Tracey:** Writing – review & editing.

Declaration of competing interest

The authors declare no conflict of interest exists in relation to the content of this paper.

Data availability

Data will be made available on request.

[4] To effectively frame incentives requires creating these messages based on actual data from the community. They may vary the referent in the message (e.g., residents vs. neighbors), the ways in which the data or normative information is presented, and other message elements.

References

References of particular interest have been highlighted as:

* of special interest

1. Rhodes N, Shulman HC, McClaran N: **Changing norms: a meta-analytic integration of research on social norms appeals**. *Hum Commun Res* 2020, **46**:161–191.
2. Kerr J, Lapinski M, Liu R, Zhao J: **Long-term effects of payments for environmental services: combining insights from communication and economics**. *Sustainability* 2017, **9**:1627.
3. Lapinski MK, Liu RW, Kerr JM, Zhao J, Bum T: **Characterizing interpersonal influence for grassland conservation behaviours in a unique population**. *Environ Commun* 2019, **13**: 664–680.
4. Cialdini RB, Reno RR, Kallgren CA: **A focus theory of normative conduct: recycling the concept of norms to reduce littering in public places**. *J Pers Soc Psychol* 1990, **58**:1015–1026.
5. Rimal RN, Real K: **How behaviors are influenced by perceived norms: a test of the theory of normative social behavior**. *Commun Res* 2005, **32**:389–414.
6. Bowles S, Polanía-Reyes S: **Economic incentives and social preferences: substitutes or complements?** *J Econ Lit* 2012, **50**:368–425.
7. De Walque D: **The use of financial incentives to prevent unhealthy behaviors: a review**. *Soc Sci Med* 2020, **261**, 113236.
8. Giles EL, Robalino S, McColl E, Sniehotta FF, Adams J: **The effectiveness of financial incentives for health behaviour change: systematic review and meta-analysis**. *PLoS One* 2014, **9**, e90347.
9. * Schwalbe N, Hanbali L, Nunes MC, Lehtimaki S: **Use of financial incentives to increase adult vaccination coverage: a narrative review of lessons learned from COVID-19 and other adult vaccination efforts**. *Vaccine X* 2022, **12**, 100225.
10. García S, Saavedra J: **Educational impacts and cost-effectiveness of conditional cash transfer programs in developing countries: a meta-analysis**. *Rev Educat Res* 2017, **87**(5): 921–965. https://doi.org/10.3102/0034654317723008.
11. Salzman J, Bennett G, Carroll N, Goldstein A, Jenkins M: **The global status and trends of payments for ecosystem services**. *Nat Sustain* 2018, **1**:136–144.
12. Segerson K: **Group incentives for environmental protection and natural resource management**. *Annu Rev Resour Econ* 2022, **14**:597–619.
13. * Lliso B, Arias-Arévalo P, Maca-Millán S, Engel S, Pascual U: **Motivational crowding effects in payments for ecosystem services: exploring the role of instrumental and relational values**. *People Nat* 2022, **4**:312–329.
14. * Fishbach A, Woolley K: **The Structure of intrinsic motivation**. *Annu Rev Organ Psychol Organ Behav* 2022, **9**:339–363.
15. Kerr JM, Bum T, Lapinski MK, Liu RW, Lu Z, Zhao J: **The effects of social norms on motivation crowding: experimental evidence from the Tibetan Plateau**. *Int J Commons* 2019, **13**:430.
16. Lapinski MK, Kerr JM, Zhao J, Shupp RS: **Social norms, behavioral payment programs, and cooperative behaviors: toward a theory of financial incentives in normative systems**. *Hum Commun Res* 2017, **43**:148–171.
17. Hembroff LA, Martell D, Allen R, Poole A, Clark K, Smith SW: **The long-term effectiveness of a social norming campaign to reduce high-risk drinking: the Michigan State University experience, 2000–2014**. *J Am Coll Health* 2021, **69**:315–325.
18. Shulman HC, Rhodes N, Davidson E, Ralston R, Borghetti L, Morr L: **The state of the field of social norms research**. *Int J Commun* 2017, **11**:22.
19. Foxcroft DR, Moreira MT, Almeida Santimano NM, Smith LA: **Social norms information for alcohol misuse in university and college students**. *Cochrane Database Syst Rev* 2015, **2015**.
20. Chung ACA: **Rimal RNRRN: social norms: a review**. *Rev Commun Res* 2016, **4**:1–28.
21. * Liu RW, Lapinski MK, Kerr JM, Zhao J, Bum T, Lu Z: **Culture and social norms: development and application of a model for culturally contextualized communication measurement (MC3M)**. *Front Commun* 2022, **6**.
22. Garnett C, Crane D, West R, Michie S, Brown J, Winstock A: **Normative misperceptions about alcohol use in the general population of drinkers: a cross-sectional survey**. *Addict Behav* 2015, **42**:203–206.
23. Koch D-J, Verholt M: **Limits to learning: the struggle to adapt to unintended effects of international payment for environmental services programmes**. *Int Environ Agreements Polit Law Econ* 2020, **20**:507–539.
24. Prentice DA, Miller DT: **Pluralistic ignorance and alcohol use on campus: some consequences of misperceiving the social norm**. *J Pers Soc Psychol* 1993, **64**:243–256.
25. Berinsky AJ, Kinder DR: **Making sense of issues through media frames: understanding the Kosovo crisis**. *J Polit* 2006, **68**:640–656.
26. Chong D, Druckman JN: **Framing theory**. *Annu Rev Polit Sci* 2007, **10**:103–126.
27. Mortensen CR, Neel R, Cialdini RB, Jaeger CM, Jacobson RP, Ringel MM: **Trending norms: a lever for encouraging behaviors performed by the minority**. *Soc Psychol Personal Sci* 2019, **10**:201–210.
28. Sparkman G, Walton GM: **Dynamic norms promote sustainable behavior, even if it Is counternormative**. *Psychol Sci* 2017, **28**:1663–1674.
29. Marsh DR, Schroeder DG, Dearden KA, Sternin J, Sternin M: **The power of positive deviance**. *BMJ* 2004, **329**:1177–1179.
30. Singhal A: **Communicating what works! Applying the positive deviance approach in health communication**. *Health Commun* 2010, **25**:605–606.
31. Rimal RN, Lapinski MK: **A Re-explication of social norms, ten years later: social norms**. *Commun Theor* 2015, **25**:393–409.
32. Rimal RN, Lapinski MK, Cook RJ, Real K: **Moving toward a theory of normative influences: how perceived benefits and similarity moderate the impact of descriptive norms on behaviors**. *J Health Commun* 2005, **10**:433–450.
33. Zhuang J, Cox J, Cruz S, Dearing JW, Hamm JA, Upham B: **Environmental stigma: resident responses to living in a contaminated area**. *Am Behav Sci* 2016, **60**:1322–1341.
34. Burtch G, Hong Y, Bapna R, Griskevicius V: **Stimulating online reviews by combining financial incentives and social norms**. *Manag Sci* 2018, **64**:2065–2082.
35. Chen X, Lupi F, He G, Liu J: **Linking social norms to efficient conservation investment in payments for ecosystem services**. *Proc Natl Acad Sci USA* 2009, **106**:11812–11817.
36. Dolan P, Metcalfe R: *Neighbors, knowledge, and nuggets: two natural field experiments on the role of incentives on energy conservation*. 2015, https://doi.org/10.2139/ssrn.2589269.
37. Pellerano JA, Price MK, Puller SL, Sánchez GE: **Do extrinsic incentives undermine social norms? Evidence from a field experiment in energy conservation**. *Environ Resour Econ* 2017, **67**:413–428.
38. Thorndike AN, Riis J, Levy DE: **Social norms and financial incentives to promote employees' healthy food choices: a randomized controlled trial**. *Prev Med* 2016, **86**:12–18.

Further information on references of particular interest

9. * A review of 26 articles examining the use of incentives to encourage vaccination among adolescents, students, elderly, health and social care workers, people with substance misuse disorders, and people who inject drugs. The researchers found evidence that financial incentives increase both the coverage and intention to be

vaccinated and mixed results for alternative incentive forms (e.g., lottery programs and non-financial incentives). There was no evidence, however, that incentives alleviate the concerns of those hesitant to receive a vaccination.

13. * A framed field experiment testing the motivational effect of different framings of payments for ecosystem services (PES) in three communities in Colombia. The researchers found that PES schemes framed as harmonizing with local community values and relating to nature tended to encourage higher rates of environmental conservation even after the payments ended. In addition, the effect of PES schemes depended on multiple factors related to personal characteristics, trust in institutions, and socio-economic dependence on nature.

14. * The authors review recent literature on the causes of intrinsic motivation in the workplace, with implications for workers and managers. The study reviews recent research taking a structural perspective regarding intrinsic motivation, where it is seen as occurring when the goal of work and the activity to achieve it mentally fuse together in the worker.

21. * This paper introduces a model for measuring social norms and factors impacting the norm-behavioral relationship in cross-cultural settings. It applies the model using culturally derived measures in a population of herders on the Tibetan Plateau, providing evidence for the construct validity and reliability of the measures.