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Review

When and why does gossip increase prosocial behavior?

Annika S. Nieper¹, Bianca Beersma¹, Maria T. M. Dijkstra¹ and Gerben A. van Kleef²**Abstract**

Understanding when people behave prosocially is integral to solving many challenges in groups and society. Gossip—the exchange of information about absent others—has been proposed to increase prosocial behavior, but findings are mixed. In this review, we illuminate the relationship between gossip and prosocial behavior, reconcile disparate findings, and suggest new directions for research. Our review reveals that gossip increases prosocial behavior to the degree that a) it is accurate rather than inaccurate, b) targets are interdependent with, rather than independent from, gossip receivers, and c) targets anticipate that they might be gossiped about, rather than actually experience negative gossip. We discuss implications of our reviewed findings for understanding when gossip serves to uphold desirable behavior and when it inadvertently engenders undesirable behavior.

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Keywords

Prosocial behavior, Gossip, Reputational concern, Accuracy, Interdependence, Experienced, Threat of gossip.

Introduction

Understanding when and why people behave prosocially (or cooperate i.e., benefit others [1])¹ is integral to solving many local and global challenges—from working on a group project to climate change or a global pandemic [4]. One factor that has been argued to explain when and why people act prosocially is gossip, defined as communication between a sender and receiver about an absent person (i.e., the gossip target) [5]. According to indirect reciprocity and partner selection theories [4,6–12], gossip is an essential mechanism that explains why humans cooperate at such a large scale in comparison to animals. Gossip enables individuals to learn how somebody else has behaved before, without having to interact with this person directly, and as such it can protect them against exploitation by untrustworthy partners. Thus, gossip allows the receiver to cooperate with those that the gossip sender depicts as cooperators and to defect against those depicted as defectors (this is referred to as indirect reciprocity), or to specifically select those as interaction partners about whom favorable gossip was received (this is referred to as partner selection).

These theories imply that *in principle*, gossip should increase prosocial behavior both at the individual and at the group level of analysis.² Specifically, at the individual level, the possibility of being gossiped about can make people concerned about their reputation [13], because if negative information is conveyed about them via gossip, this could have adverse consequences for them via indirect reciprocity or partner selection. Thus, when there is a chance that people become gossip targets, this should increase their prosocial behavior via reputational concern [14,15]. At the group level, the negative consequences of being gossiped about that individual group members anticipate, will ultimately result in more prosocial interaction patterns [11].

¹ Prosocial behavior is defined as any action that benefits another person [2]. Cooperation is sometimes defined as a specific category of prosocial behavior, namely helping within interdependent relationships (i.e. relationships in which all involved parties contribute towards some common goal), while in other disciplines cooperation is used interchangeably with the term prosocial behavior, see West et al. for a discussion [3]. In the current article, in line with West et al. we use the terms prosocial behavior and cooperation interchangeably as both provide a benefit to the recipient.

² In case cooperation levels in a group are very low, and gossip therefore mostly conveys negative information about others, this would not be the case.

Empirical evidence is largely in line with this reasoning. Studies show that people cooperate more (i.e., provide more personal resources to interdependent others) when others can gossip about them [9,11,12,14–22]. Moreover, findings show that the mechanism responsible for this effect is reputational concern; people are more concerned about their reputation if others can gossip about them [14,15] and this in turn increases their cooperation. Also, when opportunities for gossip are present in groups, this promotes and maintains group cooperation at higher levels than when they are not, and it fosters partner selection [11,23]. Specifically, when gossip is possible, people behave more cooperatively in interactions with others, increasing the number of cooperative interactions at the group level.

Whereas the theoretical propositions and empirical findings described above highlight the positive effects of gossip on prosocial behavior, recent findings indicate that gossip can also decrease cooperation and as such have detrimental effects on collective outcomes. Here, we review the literature on gossip and prosocial behavior, and highlight recent advances that illuminate when and how gossip increases versus decreases prosocial behavior. We focus on three partly interrelated factors that emerge from recent studies as particularly relevant, namely the accuracy of gossip, the interdependence structure within which gossip takes place, and whether gossip is actually experienced or merely anticipated (see Figure 1). Based on this review, we suggest new avenues for research.

Accuracy of gossip

The proposition derived from indirect reciprocity and partner selection theories that gossip increases prosocial

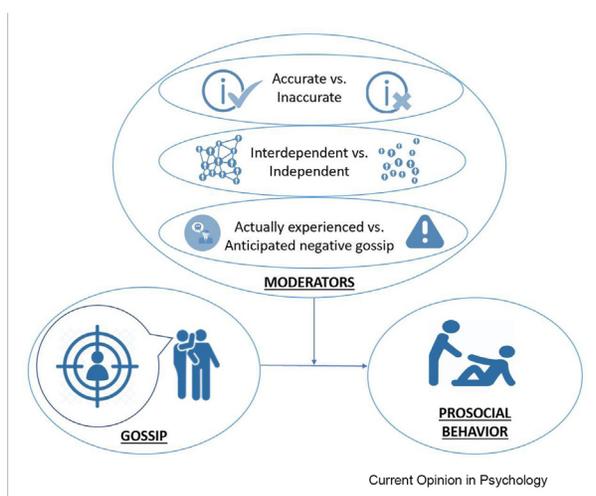
behavior is predicated on the assumption that gossip contains accurate information. That is, only accurate information about others will allow group members to cooperate with truly cooperative others (rather than others who may be falsely portrayed as such) and/or to select truly cooperative partners. However, in real life, rather than providing a ready source of accurate reputational information, information that is spread about gossip targets might be inaccurate. Recent estimates from lab studies that allowed for the possibility to send inaccurate information via gossip revealed that 19 to 43 percent of all gossip statements were inaccurate [24,25].

If people transmit inaccurate information via gossip, this might cause the positive cycle of indirect reciprocity and partner selection to break down, because in this case, reputational information obtained via gossip is a poor guide to one's partner's future cooperation. Indeed, gossip that is likely to be inaccurate has been shown to influence person evaluations [26]; even when gossip recipients were aware that gossip might contain inaccurate information, the gossip statements they received still impacted their evaluations of targets. Such evaluations may in turn influence recipients' behavior towards targets. Taken to its extreme, inaccurate negative gossip (portraying cooperators as defectors) could lead to interaction patterns in which cooperators, rather than being rewarded for their cooperation, are treated as defectors by gossip recipients. In addition, inaccurate positive gossip (portraying defectors as cooperators) could lead gossip recipients to cooperate with them, leading to exploitation and thus to loss of resources that could otherwise have been used for group goals.

Some studies provide evidence supporting the interaction patterns described above. For example, in studies in which experimenters implemented “noise” in gossip statements (i.e., distorted them such that the information shared via gossip might be no longer accurate), gossip was found to be less effective at securing cooperation than gossip that was not contaminated by noise [16,27]. Also, in an agent-based model, Testori et al. [28] showed that when gossip contained a lot of inaccurate negative information about group members, it reduced group members' willingness to cooperate and therefore negatively influenced cooperation at the group level when indirect reciprocity and/or partner selection was possible. When inaccurate gossip was not possible, this was not the case.³

The above studies focused on experimenter-induced distortions of gossip content. Interestingly, studies examining naturally-occurring lies in gossip, meaning

Figure 1



The moderating role of the accuracy of gossip, the interdependence structure, and whether gossip was experienced or is anticipated on the relationship between gossip and prosocial behavior.

³ Unfortunately, this study only examined inaccurate negative gossip (cooperators portrayed as defectors), but not inaccurate positive gossip (defectors portrayed as cooperators), so the results do not allow drawing conclusions about the impact of positive gossip on group cooperation and whether the observed effect is mainly driven by inaccurate negative information or inaccurate information itself, regardless of valence.

that gossip senders could choose themselves whether they want to lie and if so to which extent, suggest that these naturally occurring lies have little impact on prosocial behavior [24,25].

The above overview shows that recent studies have started taking into account that gossip can be inaccurate, and it highlights that the accuracy of gossip impacts the extent to which gossip increases prosociality. We see this line of research as promising. Yet, with regards to the impact of gossip inaccuracy on prosocial behavior, many important questions still remain unanswered and leave a puzzle. One such question relates to the discrepancy in findings between studies in which experimenters distorted gossip statements (in which cooperation was strongly reduced) and studies in which participants could engage in lies themselves (in which cooperation did not suffer much from gossip inaccuracy). One explanation for this might be that the naturally occurring lies mostly consisted of exaggerations (e.g., someone who was mildly uncooperative was portrayed as very uncooperative, and someone who was mildly cooperative was portrayed as very cooperative), rather than completely reversed descriptions of targets' behavior. When gossip contains to a large extent such "exaggeration lies" gossip apparently still fosters prosocial behavior at the group level. Potentially, in everyday life, people can readily discard naturally occurring lies in gossip as they have more contextual information available or can verify the content that is shared via gossip by seeking multiple sources of information. Studies that allow for "naturally" occurring gossip are needed to examine these possibilities.

Another question that currently remains unanswered is in which situations people completely reverse information about targets (i.e. depict cooperators as non-cooperators and vice versa) rather than merely exaggerate actual target behaviors, and how this influences prosocial behavior. One possibility is that if gossip senders expect gossip receivers to check gossip veracity by cross-validating it with multiple sources, this would lead them to refrain from lying very blatantly while gossiping (and perhaps to prefer using "exaggeration lies" rather than extreme lies as in Peters & Fonseca found [27]).

Interdependence structure

The simplest structure in which gossip can take place is that of a triad consisting of a sender, a receiver, and a target of gossip [5,29]. The interdependence structure between the three members of the triad affects the relationship between gossip and prosocial behavior in two ways.

Firstly, the interdependence structure affects whether gossip is sent at all and whether accurate or inaccurate information is transmitted via gossip. Positive

interdependence of the gossip *sender* with the (potential) gossip *recipient* (meaning the gossip sender's and recipient's outcomes are positively related) should motivate gossip senders to send (accurate) gossip, whereas negative interdependence with the *recipient* (meaning the gossip sender's and recipient's outcomes are negatively related) might motivate them to not send any gossip or even send false gossip. In addition, positive interdependence of the gossip *sender* with the (potential) gossip *target* should motivate gossip senders to send positive gossip about them, whereas negative interdependence with the target might motivate them to send negative gossip [24]. In a laboratory study, the interdependence structure between gossip senders, recipients and targets was manipulated such that gossip senders could benefit personally from (falsely) portraying a gossip target as cooperative or uncooperative. The results showed that this interdependence structure influenced the extent to which gossip senders shared gossip about the target's behavior, and in case they sent gossip, how truthful it was. Specifically, when gossip senders were interdependent with the gossip target and benefitted from portraying the target as cooperative, they were more likely to gossip falsely by misrepresenting an uncooperative target as cooperative. Through impacting whether gossip is sent, and if it is sent, how accurate it is, the interdependence structure between gossip senders and recipients/targets can thus affect how useful gossip can be in fostering indirect reciprocity and partner selection and, therefore, in promoting prosocial behavior.

Secondly, the interdependence structure impacts the extent to which gossip is consequential for targets. Two behavioral studies showed that when participants knew they could be gossiped about but were independent from the gossip recipient and would never interact with them, the possibility that they might become the target of gossip did not increase their prosocial behavior. In contrast, when they knew that the gossip would be transmitted to a relevant other, that is, someone they would interact with in the future, they behaved more cooperatively [8,30]. In a similar vein, a recent study on gossip and honesty showed that gossip did not increase honesty when targets were aware that the receivers of gossip would not be able to affect the target's monetary outcomes, while gossip did increase honesty when the gossip target and recipient were financially interdependent [30]. In line with theories on indirect reciprocity and partner selection, these findings show that the interdependence structure between the gossip target and the gossip recipient is crucial in determining how effective gossip is in promoting gossip targets' prosocial behavior.

So far, many experiments studied gossip to irrelevant others, and thereby did not include the possibility that gossip is sent to somebody who is relevant for the gossip

target e.g., [30,31]. As mentioned above, however, the interdependence between gossip target and recipient is a crucial factor in determining whether gossip promotes prosocial behavior, and theories of indirect reciprocity and partner selection rely on potential future interaction for the mechanisms of indirect reciprocity and partner selection to play a role. In daily life, most interactions contain at least a small risk that the information transmitted via gossip might reach somebody who is relevant for the target, due to the high level of interconnectedness that characterizes current society [33]. In order to reflect the characteristics of gossip in daily life, we recommend taking this into account when studying gossip, by incorporating the risk that gossip may be transmitted to somebody that is relevant for the target. This will benefit the generalizability of study findings. Future studies could examine how likely it has to be that gossip will reach relevant others in order for gossip to increase targets' prosocial behavior. Based on the reviewed results above, we expect that a tiny risk that gossip might be transmitted to a relevant other will already increase targets' prosocial behavior.

Actually experienced versus anticipated negative gossip

Whereas several studies have examined *the possibility* that people become the target of gossip (typically finding positive effects on targets' prosocial behavior), only few studies have examined the impact of *actually* becoming the target of gossip. The studies that have examined this suggest that actually being gossiped about has a different impact on prosocial behavior than anticipating the possibility of being gossiped about, especially when the gossip target learns that relevant others, for example colleagues in their work team, have engaged in *negative* (vs. positive) gossip about them.

Recent studies highlight that for those who experienced being the target of gossip (rather than experiencing the threat of it), the presence of gossip can decrease rather than increase prosocial behavior. First, correlational evidence shows that workers who perceive to be the targets of negative gossip decrease their work effort and prosocial behavior [34–36]. Second, a multi-method study demonstrated that when people learned that they were the target of negative gossip, they were less likely to contribute to group goals owing to increased negative affect and a decreased sense of social inclusion in the group [37]. These findings suggest that the positive effects of gossip on (potential) targets' prosocial behavior [14,16,17] are limited to situations in which gossip *might occur*, instead of *where it actually did* occur. When the threat of being gossiped about is present in a group, people apparently increase their prosocial behavior to prevent the gossip from happening. However, when people experience (or perceive) to already be the target of negative gossip, a different process is set in

motion and negative affect and a reduced sense of inclusion in the group lead them to withdraw from the group rather than invest in it via prosocial behavior.

Previous work has largely ignored how experienced *positive* gossip influences prosocial behavior. On the one hand, people may not want to lose their reputation of being a prosocial person, and they might therefore continue engaging in high levels of cooperation, or even increase their prosocial behavior when they experience being the target of positive gossip. On the other hand, people might also use this reputation for their benefit, and decrease their prosocial behavior to the extent that they can still uphold their positive image while not behaving as prosocially anymore. We recommend examining the impact of positive gossip on cooperation in future studies.

Conclusions and suggestions for future research

We reviewed empirical research on the link between gossip and prosocial behavior to illuminate when gossip promotes prosocial behavior and when gossip undermines it. Our review revealed three moderating factors that help to reconcile disparate findings: the accuracy of gossip, the interdependence structure between actors in the gossip triad, and whether gossip is actually experienced versus anticipated. The impact of these factors has so far been examined mostly in isolation. In future studies it would be interesting to investigate their joint impact as well as to identify further boundary conditions of the effects reviewed here. For example, we discussed how actually experiencing, rather than merely anticipating the possibility of, becoming the target of negative gossip lowers feelings of social inclusion in the group and thereby undermines prosocial behavior. Perhaps these effects are moderated by the perceived accuracy of gossip: If targets perceive the gossip about them to contain false information, they might feel that they have been wrongfully punished via gossip [38], which would reduce their prosocial behavior. Conversely, when targets perceive the gossip to be truthful, they might be inclined to attempt to repair their reputation by engaging in prosocial acts.

An additional moderator of the effect of actually experienced versus anticipated gossip might be the dependency on one's group members or the availability of alternative groups that gossip targets can join. If somebody learns that they have been gossiped about negatively by their group members, yet has no alternative groups to join, they may feel compelled to resolve the issues that sparked the gossip and restore their reputation rather than reduce their effort and detach from the group, which may result in targets increasing their prosocial behavior. In contrast, the presence of alternative groups might lead to reduced cooperation with the

group in which one became the target of gossip and lead one to exit this group to join another group.

Another factor that might further influence the relationship between gossip and prosocial behavior is the visibility of prosocial behavior. If people want to restore their reputation or think they have been gossiped about negatively, they might be especially likely to decrease prosocial behaviors that are not very visible to others while still trying to maintain visible prosocial behaviors that have reputational consequences. Future research could investigate such social dynamics to further understanding of how gossip influences prosocial behavior.

Going forward, we see a need for studies on gossip and prosocial behavior that combine experimental rigor with fine-grained analysis of gossip statements as they “naturally” occur. Such studies would allow researchers to examine how gossip senders construct gossip statements within different interdependence structures and provide insights into what elements of gossip statements lead recipients to be influenced by gossip, or rather, to discard it. As discussed earlier, to capture real-life gossip dynamics, researchers should additionally consider including a risk that gossip is transmitted to a relevant person when studying the consequences of gossip for the gossip target.

A final fruitful direction for future research is to examine what happens in situations in which prosocial behavior engendered by (the possibility of) gossip is harmful for society as a whole, for instance because it is unethical [39–41]. For example, in the case of corruption or “partnering in crime” helping another person has damaging effects for the broader collective. In such instances, gossip (or the threat thereof) could have adverse effects for society, because when gossip is present and people are therefore more concerned about their reputation [14,15], they are likely to act more in accordance with perceived social norms [21], potentially increasing prosocial unethical behavior. Furthermore, in terms of partner selection, gossip might enable corrupt people to find corrupt partners (e.g., when the Mafia seeks new members, gossip might inform them that someone is the right fit for their organization). Future research in those directions will help to further understand when gossip increases prosocial behavior and when it has adverse effects.

In closing, we have shown that gossip can but does not always stimulate prosocial behavior. Whether it does depend on gossip accuracy, the interdependence structure of the parties in the gossip triad, and whether gossip is actually experienced versus anticipated. We hope our review and research directions will spark new investigations that will further our understanding of when gossip increases prosocial behavior and when it does not.

Author’s contributions

A.S. Nieper wrote the first draft of the manuscript. All authors contributed to the writing of the manuscript and approved the final version of the manuscript for submission.

Conflict of interest statement

The authors declare no conflict of interest.

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